

EDUCATION IN FREEFALL

A CASE FOR THE REBIRTH,
RECLAMATION, AND
FUTURE OF LEARNING



AICONIUM
EDUCATION

Introduction

K-12 schools mass produce the American economy's most vital resource – its workforce. Basic skills such as reading, writing, and problem solving alongside a host of soft skills like communicating, collaborating, and time management are all requisites of productive and adaptable workers. These essential skills are not simply acquired by students, they are developed through intentional, structured learning and the daily guidance of educators (Darling-Hammond & Bransford, 2005). Teachers are catalysts for cultivating those skills, so their skillset is critical to building student mastery.

For the past decade, states have controlled teacher preparedness, a shift initiated by the Every Student Succeeds Act (ESSA), that transferred this authority from federal to state levels in 2015. While Section 1111(g)(2)(J) of the law mandates that teachers meet state certification and licensure requirements in their subject areas, it represents a step down from the No Child Left Behind Act of 2001, which required teachers to demonstrate subject-matter competence through federal exams or specific coursework (U.S. Department of Education, 2015). The removal of the “highly qualified” requirement has made it easier for states to assign teachers to classrooms, but it has not led to widespread improvements in teacher proficiency or student growth.

Secretary of Education, Linda McMahon claims that growth in Alabama and Louisiana, despite last year's poor national test scores, proves that states don't need Washington's help. Growth in one content area for one grade level in two states over the past ten years is hardly justification for removing national oversight. Since ESSA gave states more control over teacher selection and placement, results have been inconsistent, with rising turnover, burnout, and more teacher shortages than the country has ever seen (Adams, 2022; Sutchter et al., 2016). This outcome isn't surprising – teaching requires dexterity, which cannot be produced under relaxed credentialing processes.

State control in this one area has led to inconsistent standards, quality gaps, and greater instability for students. If this is the result of limited state authority, what happens when they're given more? The higher headline is: What guarantee do stakeholders have that students in different states will receive a quality education and be equally prepared for college and careers without a national governing authority?

This whitepaper highlights:

- the current state of educator preparedness,
- opportunities for revitalizing and reclaiming key educational principles, and
- a call for transformative action to shape the future of learning in K-12 schools.

The Current State

A Nation at Maximum Risk

Forty-two years ago, *A Nation at Risk* warned us of a looming crisis in US education. The writers declared that our schools were failing to prepare students for the demands of the modern world and called for urgent reform (Gardner et al., 1983). Even with recurring modifications in policy, curriculum overhauls, and billions of dollars on programs and resources, education reform efforts holistically have been fragmented and disjointed from the realities of the classroom (Chingos & Whitehurst, 2012). The headlines have consistently shown achievement stagnated, college readiness in decline, and employers' concerns that graduates lack fundamental skills in literacy, numeracy, and problem-solving (*Condition of Career Readiness*, n.d.; *Partnership for 21st Century Skills* n.d.; *The Future of Jobs Report 2025*, 2025).

While the US has remained fixed in cycles of ineffective reform, the problem has never been the existence of a national education department, but the department's failure to define, communicate, and measure expectations clearly and comprehensively or, more importantly, its failure to bridge the gap between policy, classroom practice, and student outcomes (Bryk et al., 2015b; Darling-Hammond, 2010; Jackson, 2024; Tyack & Cuban, 1995). Since states gained more control over teacher selection, education, and placement under ESSA, reports have conveyed similar media messaging, signaling that the shift has only resulted in short-term fixes rather than sustainable solutions to these long-standing issues. To illustrate the challenge of teacher capacity and the potential effects of dismantling the Department of Education, two major policy breakdowns are underscored below.

Policy: State Responsibility for Setting Challenging Academic Standards and Aligned Instructional Materials for Students

Breakdown: Misalignment

ESSA Section 1111(c)(4)(B) requires states to ensure that all students have access to challenging academic standards and aligned instructional materials. Educators (and some instructional materials) hold differing views on the right approach to teaching concepts or implementing standards accurately. On a national scale, this lack of consistency causes rifts in the country's shared understanding, thereby crippling workforce preparedness and social cohesion. In research on curriculum quality and alignment, Jackson (2024) specified that one major cause of students' struggle in mathematics is the frequent mismatch between curriculum, instruction, and assessment and their presentation of math tasks. This structural misalignment, especially between the three, causes a broken knowledge exchange circuit in which what is taught, what is tested, and what students learn are profoundly disconnected. Research results revealed variations in how different educator groups – teachers, leaders, curriculum developers, and assessment writers – interpret math standards, directly contributing to the miseducation of math students. The scenario below shows how misalignment impacts academic growth and subsequently students' mathematical experiences beyond elementary and secondary classrooms.

Note: this explanation is used for demonstration only and is not necessarily reflective of the identified regions.

Simplify this expression: $100 \div 4(3 + 2)$

West & Midwest School Districts: "When we teach this concept, we model the order of operations to simplify. Students learn that the value is 125."

Southeast School Districts: "When we teach this concept, we model the order of operations to simplify. Students learn that the value is 5."

Southwest School Districts: "We do not teach this concept to students. Instruction on this concept is for exposure only as a means to prepare students for deep knowledge building of this concept in high school."

Northeast & Mid-Atlantic Region School Districts: When we teach this concept, we demonstrate how simplifying the expression can lead to two different values, 125 and 5. We explain that a problem like this one often causes confusion because it is ambiguous whether the division should be performed before or after the multiplication. If the division is done first, the expression simplifies to 125. However, if $4(3+2)$ is considered a single entity, as shown here with additional symbols: $100 \div [4(3+2)]$, multiplication is done first and the expression simplifies to 5. Instruction in our region aims to build students' reasoning (Mathematical Practice 2), justification (Mathematical Practice 3), and precision skills (Mathematical Practice 6). Our focus on thinking and problem-solving with mathematical practices 2, 3, and 6 offers students opportunities to discover that a task like this relies on knowledge of mathematical notation. As written, without a clear indication of grouping, the expression could lead some people to simplify one way and others to simplify another way based on the convention used. We push students to avoid confusion by always using symbols to explicitly indicate the order of operations. As a best practice, we also add context to eliminate ambiguity and help students cement new learning:

$\frac{100}{(\frac{100}{4})(3+2)}$	$\frac{100}{4(3+2)}$
The expression is recognized as one hundred divided by four times the sum of two and three	The expression is recognized as one hundred divided by the product of four and the sum of two and three
<i>Sample Context:</i> A shipping warehouse processes 100 digital labels just before closing. The labels are divided equally across 4 different departments. Each department then forwards its set of labels to 3 international teams and 2 domestic teams by email for printing. At the close of business, how many total labels does each department print?	<i>Sample Context:</i> Dr. Jackson has 100 gift cards that she wants to share equally with her 4 dental offices. In each office the gift cards will be split evenly across the 3 new patient groups and the 2 other patient groups. How many gift cards will each group get?

From this one situation, we can see that more than seventy percent of the students in the country would not be presented with the opportunities to build comprehensive knowledge of this concept. This math problem went viral on social media, revealing the great divide between math educators. Since there are many math concepts and they increase in complexity, it is harmful for students to receive misinformation via defective teaching¹ and it's just as disparaging if teachers in every state don't share common goals for what math students should learn and what they should be able to do. Success with any set of expectations - national or state-specific, for students or adults, requires a shared, common language and common interpretations of the expectations across all educators in the work. The alternative is a huge misstep. While groups like Ed Reports and Ed Gate provide valuable insights, true academic progress in students happens when instruction, materials, assessments, and supports are fully aligned (Jackson, 2024).

¹ Defective Teaching is a shallow, mechanical approach to instruction resulting from a preparation program, system, or model that failed to cultivate deep, transferable knowledge in the teacher. Defective teaching or instruction manifests when teachers function as curriculum operators instead of intellectual authorities, blindly following or using instructional materials without the expertise to evaluate, adapt, or enhance them as needed to meet the needs of students (Vockell, 1994).

Policy: State Responsibility for Teacher Qualifications

Breakdown: Comprehensive Knowledge in Content and Content Specific Pedagogy

A review of prominent university rankings, such as those compiled by Niche (n.d.), reveals that many are recognized for their mathematics education programs. However, when inquiries were made to Harvard University, Stanford University, and the University of Florida, those institutions did not have program plans to share:

“Harvard College doesn’t have an undergraduate education department (or education concentrators), although there is a secondary field in Educational Studies” (Office of Undergraduate Education, personal communication, September 2023).

“We do not currently have an undergraduate program in mathematics education. We have a graduate program if that is of interest” (J. McGraw, personal communication, September 2023).

“The U.F. College of Education does not currently offer an approved initial teacher preparation program for mathematics education. We offer an undergraduate minor and a graduate certificate, both of which partially fulfill an alternative path to teacher certification in Florida only” (R. Robin, personal communication, September 2023).

Limitations in both preparation programs and in-service professional development have created barriers to educators' capabilities leading to incomplete/unfinished learning for students that creates or widens knowledge gaps (Worrell et al., 2014). As a result, many teachers have turned to independent learning, including joining social media forums where knowledge is shared collaboratively. However, these informal discussions often lack accuracy or research-based guidance.

“What is number sense? Educators say it. Students hear it. But nobody is getting it. There’s a disconnect somewhere. Help!”

On one platform in particular, questions and comments from educators come through daily:

- “I know there must be a trick but I’m stuck, how to find the area and perimeter of this figure?”
- “Can anyone explain to me why 5 and 6 are wrong?”
- “I wanted to tell a student that he stopped doing keep, change, flip and started doing flip, change, keep. Should I change this comment?”
- “Key says C. But I think it’s D. What are your thoughts?”
- “A group of 8th grade math teachers and I have heard some conflicting things about the System of Equations standards in Ohio.”
- “As a teacher that has a teacher hired to provide intervention, I want to know what you think. What do you think your intervention teachers should provide?”
- “Teachers with 40-minute class periods: how do you give a unit test that only takes one period and still assesses all topics covered in the unit?”
- “Looking for a book that will be a helpful resource in designing and engaging lessons and meaningful assessments – specifically for Math. Any books that you suggest?”
- “When numbers are written in the form of a fraction but they simplify to an integer, are they considered integers?”
- “This is my first year teaching math (8th)...my biggest challenge is students don’t know/don’t remember a lot of basics.”

Although well-intentioned, users often share misinformation or incomplete information, hindering teachers’ professional growth and stifling student learning.

The two policy breakdowns mentioned above are just a snapshot of the multifaceted challenges currently affecting our education systems. If immediate action is not taken, these issues will continue to produce a nation of students who are underprepared, a workforce ill-equipped for both domestic and international competition, and an increasing divide between those with access to numerous occupational opportunities and those without.

It's simple: every student should have access to deep-seated knowledge across disciplines. Academic experiences that help students reveal their talents and prepare them for careers and global competition are must-haves. But student success isn't happenstance; it's the direct result of adept educators cultivating knowledge in them and guiding them. For these benefits to be bestowed upon students, educators should have clear, research-based expectations synced to desired student outcomes. They need to be reskilled in modern, evidence-based methodologies and upskilled in advanced strategies that boost learning outcomes.

Coherence in expectations, where student standards are paired with similar standards for those tasked with decision-making, support, and instruction is just one of the key ingredients of a thriving school system. A well-structured educational model also includes strong communication and adequate resources (Fullan & Quinn, 2016; Rothman, 2021). Those three pillars – coherent expectations, suitable resources, and communication – are crucial for fostering productive educational environments. Together, they create pathways that support positive student performance and ongoing growth of the entire educational community. Without them, we cannot realistically expect students to reach their full potential.

An ideal academic system contains devices that embody the elements above to foster enrichment in adults and provide progressive learning experiences for students:

Device: Standards and Expectations

When expectations are interconnected, they create a unified educational framework that supports student learning, professional growth, effective outcomes, and long-term viability. Leaders should establish and install comprehensive performance standards for students and equally challenging, corresponding standards for the educators connected to them (Honig & Venkateswaran, 2012). Courses, sessions, and training for professionals should incorporate content and techniques that build the skills and aptitude needed for achieving goals, since teams with limited or fragmented knowledge may struggle to make effective decisions. In addition to meeting educational outcomes and reducing overspending, deep content knowledge and strong pedagogical skills can debunk implementation myths, replace ineffective practices, and end infamous and overused "buzzwords" that sound good but don't equate to progress and dilute authentic expertise among educators (Prothero & Solis, 2023).

Teachers, in particular, need opportunities to develop understanding in both theory and practice, with targeted, high-level training in their areas of specialization. Some might stress that if teachers simply use curricular materials with fidelity, they will see results. However, the textbook and supporting materials cannot be all things to all learners. Only teachers truly know the specific academic strengths and weaknesses of their students. Ideally, teachers should have a profound understanding of the content they will be teaching so they can work in tandem with a curriculum, rather than being limited by it.

The diagnostic-curative nature of effective instruction requires teachers to have extensive knowledge and vocational adaptability. Credentialing models must reflect that level of fitness. States should recognize teaching as a highly skilled profession requiring rigorous preparation, not a role anyone can fill with minimal training. Failing to do so will only perpetuate a cycle of inconsistent expectations, underprepared and discouraged teachers, and unachievable goals.

Device: Quality-Rich Tools and Resources

Access to high-caliber tools, materials, technology, and other educational resources is not just beneficial, it's necessary. Officials must recognize manpower as the most paramount resource. Professional learning networks should be added to plans for building knowledge in teachers and leaders. These lattices foster teamwork and idea-sharing among professionals, providing ongoing support and opportunities for advancement (Day et al., 2016). Strong models of implementation for both policy and practice should also be incorporated. Educators often struggle with implementation (of curricula, initiative, etc.) because they don't have a clear, evidence-based roadmap that explains what implementation of the strategy might look and sound like in the live environment (Chingos & Whitehurst, 2012; Jackson, 2024; Nevenglosky et al., 2019).

Invest in high-quality, evidence-based tools and resources that have demonstrated impact. Thoroughly vet resources for alignment and utility. Audit vendors before making large purchases or signing inflated contracts. Ask questions like:

Efficacy, Alignment, & Utility

- What research supports the effectiveness of these materials?
- What data, case studies, or testimonials do you have that demonstrate success with students facing academic challenges similar to ours?
- Share specifically how these materials address the diverse needs of learners in our state/district.
- How do your materials align with our educational standards?
- Can these materials be easily integrated into existing instructional plans? Can they be customized as needed to differentiate instruction?
- How easily do your materials integrate with our current resources and technology platforms?
- What are the long-term sustainability plans for these materials?
- What are the plans for ongoing evaluation and revision of the materials? How often are your materials updated, and what is the process for accessing those updates?

User Experience

What feedback have you received from educators and students who have used these materials?

Cost & Commitment Transparency

- What is the total cost of ownership, including the initial purchase price and any recurring fees, technology requirements, and replacement costs over time?
- Can you provide an itemization/breakdown of all costs involved, including hidden fees for updates, training, or additional resources?
- Are there any opportunities for collaboration with other districts or states to reduce costs?

Device: Culture of Clarity Through Effective & Efficient Communication

Fostering transparent, collaborative communication among all stakeholders - from state leaders to school staff - keeps the focus on shared goals and shared ownership for student achievement. When state leaders take a partnership approach to working with district and school staff, they create a synergy that allows value, awareness, and outcomes to be the propelling force behind the day-to-day work of growing students. Effective and efficient communication serves as the cornerstone of those alliances and the vehicle of progress, ensuring that all stakeholders are informed, involved, and working towards a common goal (Bryk et al., 2015a; Fullan & Quinn, 2016; Mapp & Kuttner, 2013). Fullan & Quinn (2016), Kowalski (2011), and Reeves (2009) suggest that a culture of open, candid dialogue includes:

1. Clear Communication Protocols
2. Expectations for Information Sharing
3. Interactive Dashboards for Real-Time Data
4. Feedback Loops
5. Consistent Explanations of Policy Changes
6. Training for District and School Leaders on Best Practices in Communication
7. Clear, Concise Accountability Measures

Communication structures should include detailed communication plans, designated liaisons at each level, regular communication audits, and focus groups or advisory councils (Kowalski, 2011).

Device: Auditing Systems and Success Monitoring Groups

Checks and balances can help leaders detect and eliminate materials, policies, and practices that are more ornamental than functional (Saguin, 2019; Smith, 2020). Some cosmetic examples include:

District Level

- broad, vague goals,
- vendor partnerships with symbolic impact (e.g. high-profile connections that look impressive but fail to meaningfully bring a return on investment),
- layered bureaucracy in decision-making (excessive employees or committees and layers of approval that delay pressing decisions), and
- high-level data reviews with no actionable steps (Hitt & Meyers, 2018)

School Level

- leadership methods and models that provide limited hands-on, actionable strategies aligned with the challenges of running a school,
- annual School Improvement Plans that lack follow-through,
- surface level monitoring of live instruction (snapshots of classroom operations that fail to address specific challenges or develop targeted instructional skills),
- data hubs or dashboards focused on compliance and not action,
- mandated professional development with generic content that does not advance classroom practice,
- underused digital platforms (subscription-based edtech tools that appear innovative but go underutilized due to lack of integration into instructional routines or inadequate training), and
- complex or vague rubrics for teacher evaluation (Brown & Martinez, 2021; Dee & Wyckoff, 2015; Fishman et al., 2013; Gulamhussein, 2013; Kraft & Gilmour, 2017; Lee, 2022;).

Know what your teachers and leaders know. Lacking this insight is costly since the success of an educational system relies heavily on teacher and leader knowledge and competencies. Placement tasks could help identify strengths and weaknesses (Flanagan, 2013). This would not only help districts hire and place candidates but would also provide useful data for targeted professional development, reducing budget overspending on pricey, ineffective training sessions and materials.

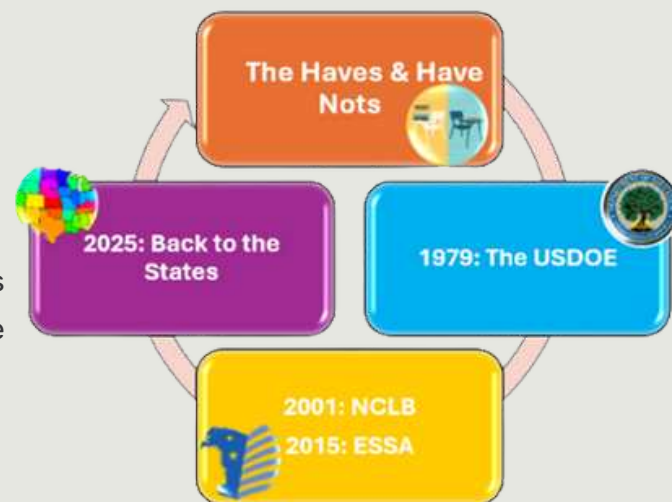
Be adamant about avoiding vague initiatives and ideas for implementation. Detailed drafts that outline goals along with defined action steps, measurable impact, and inspection methods are guides for forward movement (Baker & Green, 2015; Levin & Belfield, 2007; Marzano et al., 2005; Odden & Picus, 2014). Refer to powerhouse groups like the National Institute for Excellence on Teaching for guidance on installing self-driving systems that deliver reliable and valid results.

Build innovation and response teams to support schools in adapting to the constant evolution of 21st-century learning and effectively navigate unforeseen crises. During the 2020 pandemic, districts with existing 1:1 device programs were able to pivot smoothly to virtual learning. In contrast, many other districts faced significant challenges due to a lack of resources and preparedness. Creating adaptation teams can help schools preserve the continuity of learning, navigate challenges, and maintain steady progress with agility and confidence.

Past and present reports have documented the adverse impact of state authority mismanagement on education (Gardner et al., 1983; NAEP, n.d.). Now, to ensure that demolishing the U.S. Department of Education does not negatively affect students and the future of learning we must take action.

Contemporary researchers (e.g., Akkus, 2016; Confrey, 2012; Hinkley, 2016; Polikoff & Porter, 2014; Jackson, 2024) have advocated for the same principles as early theorists (e.g., Charters, 1923; Johnson, 1953; Shulman, 1986, 1987) – investing in the knowledge of educators, aligning credentials with proven competencies, and ensuring that every school has educators who are both knowledgeable and skilled. With or without a national governing body, educational systems, scholastic practices, and the development of high-performing practitioners in classroom and supporting roles must be reimagined immediately.

This report does not advocate for another set of temporary reforms. Instead, it calls for a drastic shift in our approach to education to prevent systemic collapse. The evolution and improvement of K-12 academic systems and the escape from this tolerable state of failure cannot be achieved through a single change.



We need dedicated teams of experts and strategic programs designed to rebuild the assets of our educational infrastructure. Blueprints that align educational research with policy and real-time practice and ensure ongoing professional growth and accountability are long overdue. Our teachers and students deserve a dynamic, responsive system committed to advancement.

The time for meaningful change is now. Seizing this moment can propel our schools to new heights of excellence and opportunity. The path forward demands unwavering commitment and action and from all stakeholders. Continuing our current course risks damaging both our democracy and economy, especially if we do not execute with precision and a pledge to fundamental safeguards. By prioritizing partnerships, investing in resources and technology, and developing a world-class workforce of teachers and leaders, we can lead the pivot towards a new era of schooling that benefits every student in every community across the nation.

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