



### **History of the Education Innovation Institute**

The General Assembly created The Education Innovation Institute (EII) in 2009 (SB 09-032) to leverage new and existing applied research to solve practical problems in education reform. It is located at the University of Northern Colorado, which has the state's largest educator preparation program. UNC secured non-state funding for the institute and hired Dr. Kristin Klopfenstein as executive director in spring 2011. Dr. Klopfenstein's experience and skills mesh well with both the institute's goals and Colorado's research agenda. Before coming to EII she was interim director of an education data warehouse run by the University of Texas at Dallas, where she worked with one of the biggest and most developed longitudinal databases in the country that links student records from K-12 into higher education and the workforce. Before that she was on the economics faculty at Texas Christian University, where she produced a respected record of scholarly research and publication.

The primary work of the institute during its first year has been to refine a mission statement, work out an 18-month strategic plan, and begin work on projects, which are described in more detail below. The institute also appointed an advisory board of nationally recognized experts and convened the group's first meeting in December 2011. The EII staff also has begun identifying potential sources of public and private funding and plans to launch a major fundraising initiative in 2012.

### **Why EII is needed**

Colorado is recognized as a national leader in education reform and other states are watching us closely. That puts implementation processes here under the microscope. It is increasingly evident that implementation policies are most likely to succeed and gain acceptance when they are informed by both the findings of rigorous research and a practical understanding of the often messy realities of school operations. One mission of EII is to break down barriers between the three groups key to successful implementation: policy makers, practitioners, and researchers. We do this by staying abreast of the latest research and thinking about ways to translate those findings into approaches that work for policy makers as well as educators. You can see examples of

# EDUCATION INNOVATION INSTITUTE

## JANUARY 2012 REPORT TO THE GENERAL ASSEMBLY

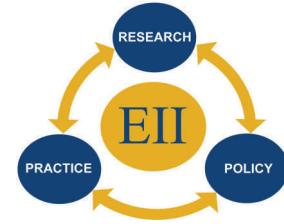
that thinking in the policy briefs attached to this document, in which we explain the problems being addressed by reform policies, suggest possible unintended consequences, and point to policies in other states that we consider instructive. It is important to note that our work is non-partisan and we work to avoid identification with any particular ideology.

The Education Innovation Institute has two broad, overarching goals:

1. To promote policies that enhance respect for education as a profession. Parents and the public are more likely to support schools if they respect the teachers. And talented young people are more likely to seek careers in teaching if they view the profession with respect. The broad goal of improving respect can be addressed from many perspectives, from improving the quality of teacher preparation to improving the credibility of licensure to improving the conditions under which teachers work. All ultimately seek to increase the likelihood that schools will attract good teachers and keep them happy and challenged for many years – an essential circumstance if Colorado is to provide high-quality education for all students.
2. To promote a climate of greater accountability in higher education. We envision this goal including such projects as determining the nature and level of benefit students derive from Colorado's various higher education institutions to advocating for postsecondary institutions to work more closely with high schools and employers. Colorado has already begun work in this area and we expect that effort to grow as budgets remain tight and interest in higher education accountability expands nationally.

Another area of great interest to EII is helping Colorado to build a high-quality database of education records that links students to teachers and K-12 to higher education and the workforce. A well-designed longitudinal data set will help improve the quality of education in several ways. Educators can use it to assess their success on the job and to meet the needs of all students. Administrators can use it to assess the success of their schools and to understand how their performance compares to others'. And researchers can use it to study trends and evaluate the impact of programs and practices.

Our mission to break down barriers between researchers, policy makers, and practitioners bears more explanation. It is illustrated by the diagram at right and more fully by the attached document “Work and Mission of EII.” While many non-profit organizations base their work in one of the three silos and may reach out to the others, we see our work residing in the arrows that connect the three areas. Our extensive background in research and work with schools, universities, and education policy positions us to anticipate and explain the needs of each group. Our policy briefs and interest in longitudinal data are good examples. The briefs explain important, but complex, issues for broad audiences by screening research on the topic for quality and explaining the findings in everyday English. The advocacy for widespread appreciation of longitudinal data arises from a belief that this powerful tool is becoming the vernacular language of educational improvement – essential for assessing the effectiveness of schools and policies and for planning fruitful improvements



Outreach and dissemination are integral parts of our mission. Whether through the policy briefs, op-ed pieces in influential publications, or symposia on selected issues, we don’t want our ideas to sit on a shelf. If our ideas don’t stimulate discussion and push against the status quo to foster a proactive climate, we will have failed. To that end, EII splits its work between projects internal to UNC and external to the broader education community. Internal projects are intended to either foster implementation of Colorado’s recently adopted reforms or serve as a laboratory to test ideas for statewide application. What follows is a list of major projects undertaken by EII since Dr. Klopfenstein began in spring 2011.

### Projects Launched during the First Year

- Published three policy briefs (attached) on teacher turnover, school finance, and social promotion.
- Initiated work with UNC faculty to revise the education leadership program to prepare principals to use data in ways required by Colorado’s recent education reforms, including the Education Accountability Act of 2009 and SB 10-191.

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## JANUARY 2012 REPORT TO THE GENERAL ASSEMBLY

- Entered into a project with the University of Colorado and the Colorado Department of Higher Education to examine the performance of teachers trained at Colorado’s universities, including UNC (per SB 10-036 and SB 11-245).
- Created internships at UNC to train PhD students in the applied statistics program to use longitudinal data to answer practical questions in education policy and practice. This competitive internship provides an avenue for training a new generation of education researchers not only to use Colorado’s developing statewide longitudinal data system (SLDS) but also to value and respect the needs of policy makers and practitioners when shaping their research questions. The first cohort of interns began in January 2012.
- Began drafting a curriculum for a new Education Policy master’s program at UNC to serve teachers brought here by Teach for America and others.
- Helped UNC faculty write a successful application for a \$365,000 grant from the Colorado Department of Higher Education to train area teachers to build academic language skills in students with limited English.
- Wrote a chapter for a special volume on Dual Enrollment to be published in the spring by Jossey-Bass, a respected house that specializes in education publications.
- Initiated outreach to other groups interested in working on the issue of higher education accountability.
- Posted five blog entries on the Ed News Colorado site to stimulate conversation about the topics of higher education accountability, the difficulty of building school reform on the backs of “super teachers,” reframing the teacher quality debate, and the importance of high-quality data to Colorado’s reform agenda.

### The Future

As EII moves into its second year and looks to the future, we plan to build on the mission and projects described in this report to advance the cause of sound, practical education policies for Colorado and the rest of the country. We plan to expand our work on higher education accountability and, at the advice of our advisory board, leverage that effort by linking to other groups working

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## JANUARY 2012 REPORT TO THE GENERAL ASSEMBLY

nationally on that topic. We also plan to expand our work on assessing teacher prep programs to identify which parts are working and which need improvement. We expect to finalize plans for the new education policy master's program at UNC and to continue working with the UNC faculty to keep the teacher preparation and education leadership programs up to date with Colorado reforms. And we plan to write more policy briefs as additional issues gain importance and to continue writing for Ed News Colorado and other publications. We also plan to launch a major fundraising initiative in 2012 so we will be able to expand in additional areas. There is still much important work to do as Colorado builds its longitudinal database and puts its landmark educator effectiveness programs into place. The Education Innovation Institute is eager to play a facilitating role.

## **ATTACHMENTS**



# EDUCATION INNOVATION INSTITUTE

## MISSION STATEMENT

The Education Innovation Institute was created to stimulate educational improvement by strengthening ties between research, policy, and practice and communicating in plain English about leading issues.

Our mission operates around three statements, which must inform any project we undertake:

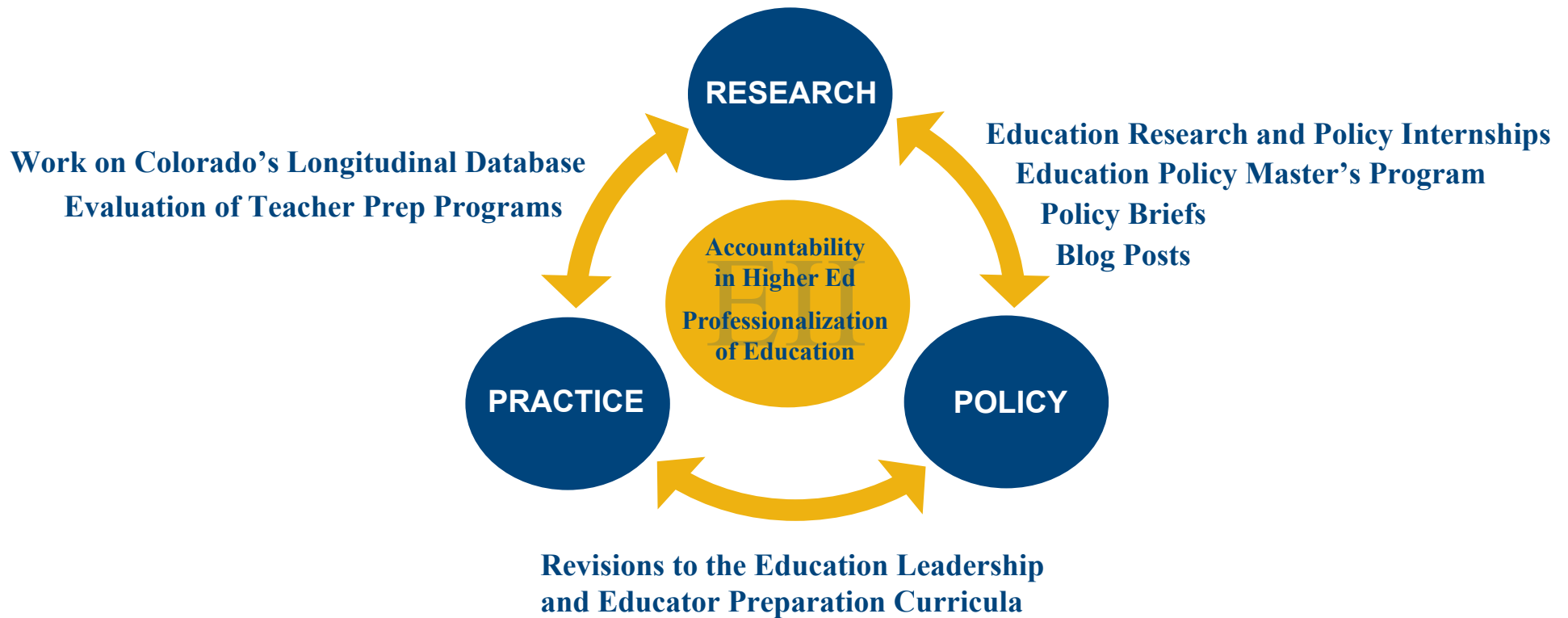


- Our work supports the advancement of **EDUCATION** as a respected profession and the transition to a climate of greater accountability in higher education.
- Our approach to **INNOVATION** is to push on the status quo to foster a proactive climate in a rapidly changing world. We seek ways to move forward when the path isn't necessarily clear.
- As an **INSTITUTE** at the University of Northern Colorado, we are accountable to the university as a whole and not wedded to the interests of any one unit.

We view **all pieces of our work as parts of a coherent whole**, with each piece being of equal value and all pieces enhancing the impact of others. Thus, our outreach through op-ed pieces and other communication informs the public about the outcomes of our research and work with policy implementation. Likewise, the outcomes of our research inform our work with policy makers. This belief in the interlocking nature of our projects leads us to certain conditions:

- The research we pursue is for pragmatic purposes. Our goal is to influence policy, inform programmatic improvement, and stimulate informed discourse. Ideally, our audience will be broad and diverse.
- As we rely heavily on private donations, we invite donors to consider funding all components of our work, from creating a new master's program in education policy at UNC to creating internships for statistics students in education research to working with the state to build a longitudinal education database, evaluate teacher prep programs, and develop prototypes for higher ed accountability. Communication, outreach, and other traditionally secondary activities are an integral part of this package.

# THE WORK AND MISSION OF EII







The PEBC Network

- > PEBC.org
- > EdNewsColorado.org
- > BoettcherTeachers.org
- > EdNewsParent.org



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DATA CENTER ISSUE IN-DEPTH: ONLINE EDUCATION TIMELY TOPICS ELECTION 2011 COVERAGE

## "Never sit down" is not a sustainable model

Written by [Kristin Klopfenstein](#) on Sep 29th, 2011. | Copyright © EdNewsColorado.org



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*Kristin Klopfenstein is the executive director of the Education Innovation Institute at the University of Northern Colorado.*

There's an education reform issue I've been thinking about lately that brings to mind the Henry Higgins song from My Fair Lady, "Why can't a woman be more like a man." Call it "Why can't all schools be more like a KIPP."

KIPP, of course, is the charter school chain that has attracted widespread praise and financial support for getting enviable academic results with disadvantaged students. It and a core of other similarly high-achieving schools insist on longer school days and years, greater parental involvement, school-wide expectations of success and the freedom to dismiss teachers who don't measure up.

Such schools are often held up as the secret to closing achievement gaps. If we could only clone those schools and their playbooks a hundred thousand times demography would no longer be destiny, all children would achieve to their potential and America would once again lead the world in educational attainment.

If only universal excellence were so simple. Just as Professor Higgins had blind spots – about himself and women, for starters – people who think they can close the achievement gap just by providing more hours of class time, better school-home communication and tougher standards are missing an important element.

### You can't scale selfless dedication

The real secret is to find a building full of teachers and administrators who are driven to work those long hours, take calls from parents day and night and embrace a culture of constant scrutiny. Replicating that level of commitment is much harder. In fact, replicating it on a national scale is probably impossible.

Steven Brill addresses this labor-pool point in his new book *Class Warfare: Inside the Fight to Fix America's Schools*. One of his featured models of reform is Jessica Reid, an assistant principal at Harlem Success Academy I, a charter school in a network that, like KIPP, has achieved strong results with disadvantaged students. It's the kind of school where the energy and dedication to kids are so high that, in Brill's words, "the adults never sit down."

For Reid, that meant taking over the classroom of a teacher who quit while continuing to supervise 10 other teachers – a commitment that made her long hours even longer and inevitably ate into her personal life.

But giving 1,000 percent – or even 150 percent – all day every day is more than exhausting, it's unsustainable. It is reasonable to expect teachers to have personal lives and to plan for a decades-long career. However, odds-beating schools typically have high faculty turnover as idealistic (and often young) teachers burn out after a few years of extraordinary effort. Brill reveals in his final chapter that Reid quit Harlem Success saying, "This wasn't a sustainable life, in terms of my health and my marriage."

### Is "just" solidly good good enough?

American public schools employ more than 3 million teachers. Is it realistic to expect all the low performers to be replaced with overachieving stars? Brill quotes one urban superintendent who estimates it would take a decade to retrain or replace the bottom third of his teaching staff. Moving faster would require him to find an annual supply of talented recruits willing to forgo sitting down for the long haul. And that's just in one district.

#### OPINION PAGES

- [News vs. Opinion](#)
- [Guidelines for bloggers, commenters](#)
- [Alan Gottlieb's Twitter feed](#)
- [Meet the bloggers](#)

#### RECENT COMMENTS

- **Ed Augden** on [Opinion: Why "Gen Y" teachers supported SB 10-191](#): Many of the expectations and hopes of...
- **Roger Kilgore** on [Opinion: Reflections on my DPS board candidacy](#): Joanne, I was referring to the cliques. Roger
- **Jim Martin** on [Opinion: Why "Gen Y" teachers supported SB 10-191](#): I find Joanne Roll's comment...
- **Joanne Roll** on [Opinion: Why "Gen Y" teachers supported SB 10-191](#): I found Leigh Campbell-Hayes comment...
- **Jessica Keigan** on [Budgeting smartly for digital success](#): I too have been a constant advocate for technology in the...

#### BLOGROLL

- [Andrea Merida's Blog](#)
- [Bridging Differences](#)
- [Charter School Insights Blog](#)
- [Colorado Charter Schools](#)
- [Colorado Classroom](#)
- [Colorado Pols](#)
- [D-Ed Reconciling](#)
- [Ed is Watching](#)
- [Ed Stein Ink](#)
- [Edspresso](#)
- [Education Gadfly's Flypaper](#)
- [Eduwonk](#)
- [Gotham Schools](#)
- [Great Education Colorado Blog](#)
- [Hechinger Report](#)
- [Intercepts](#)
- [Joanne Jacobs](#)
- [Joe Williams' blog](#)
- [Mike Klonsky's Small Talk](#)
- [Politics K-12](#)

I agree with Brill that these facts mean that the secret to transforming American schools lies with supporting and investing in mere mortals — teachers who are “just” solidly good — instead of demanding extraordinary talent, idealism and energy. This will require us to dedicate the necessary resources to motivate, energize and continuously develop all teachers, rewarding the exceptional ones both financially and with career ladders that keep them in front of students. (And while all examples of success in this essay happen to involve charter schools, I know traditional public schools also employ tens of thousands of great teachers.)

Brill lays a lot of blame for educational mediocrity at the feet of teachers’ unions. I think the problem runs deeper. Interpreting the results of KIPP and other schools of its ilk as if their success is scalable by simply training others in their methods puts too much responsibility on individual teachers and not enough on the structural failings of current education systems.

Even for teachers who maintain high expectations and a strong belief in the ability of all young minds, the waters are rough. Individual teachers often provide the only source of support for disadvantaged students tackling difficult work. And in the current system, teachers in many high-needs schools cannot meet odds-busting expectations unless they are willing, single-handedly, to meet with students before and after usual school hours, unflinchingly dish out consequences when kids don’t work hard, demand buy-in from parents and keep coming up with creative, energetic lessons until the spark catches.

Teachers who show such devotion often pay a price, as Reid felt she did. Why do we tolerate a system that requires teachers who care to pay such high costs?



**Categories:** [Featured Opinion](#), [Opinion](#)

**Tags:**

COMMENTS

## 13 Responses for

““Never sit down” is not a sustainable model”

**Alexander Ooms says:**

September 29, 2011 at 6:52 pm



I always find this argument bizarre — do law firms talk about an inability to scale by attracting bright young employees? Do management consulting firms? Software firms? Why then not teaching — it’s an equally skill-based profession. I agree we need to change a lot (I would start with schools of Ed and the single salary schedule), but I think it is an error to simply say it can’t be done.

I’ve also always believed the “you can’t scale” argument is looking through the wrong end of the education system. It really depends what you want to measure.

Denver is a great example. I often heard that some of the excellent charter networks “can’t scale” to serve the entire 80,000 student district. And if you use the inputs — the entire population as your base, that is true.

But just two networks — DSST and WDP — are on growth trajectories where they will double the number of low-income and minority kids accepted into a four-year college without remediation. Only two organizations and we can double the number college ready kids. If you use the outputs — the number of kids coming out of the current system who are getting an education, they scale pretty well.

**mark ajluni says:**

September 30, 2011 at 12:01 am



One should note, if one wants to be honest, that the poverty rate at DSST is very low in comparison to the rest of DPS schools. In addition, they receive a ton of outside funding that allows them to spend more on student services, lower class sizes, and a vast support network to support learning. Moreover, they’re quick to drop students who don’t play by their rules. Moreover, they educate few with students with special needs and language challenges. That is, they live in an educational utopia, if your goal is test scores and college readiness. If you scale all their advantages to the public system, that would be a dream come true, but where is the money come from and where are the students who can’t cut the mustard going to end up?

This doesn’t mean that nothing can be done, but it’s foolish to compare, as the article points out, the efforts of schools that play by few of the same rules and conditions that public schools do and rely on young, tireless, low paid, high turnover teachers as the panacea for our public school system. These foolish magic bullet fabulists resist the obvious truth that their beloved models can’t be scaled even when they hear it from their cherished shills—like Steven Brill in a rare moment of intellectual honesty—that might force them to accept a modest dose of pragmatism.

**Rich Harris says:**

September 30, 2011 at 7:00 am



- [Rick Hess Straight Up](#)
- [Sabrina Stevens Shupe](#)
- [School of Blog](#)
- [Scooptoo](#)
- [The Educated Reporter](#)
- [The Quick and the Ed](#)
- [This Week in Education](#)
- [Whitney Tilson's School Reform Blog](#)

I really wish the author took some time in evaluations of charter school models in other cities that have taken their operation to scale.

In Houston, YES Prep and KIPP serve over 5000 students each. Aspire in California serves serves 13000. Characterizing these schools and networks as "never sit down" models shows a true lack of analysis. The shortsightedness of this perspective does not allow for readers to hear about things these organizations do well that are much needed for reform.

Consider writing an article focusing on how they develop leadership and management, or how they manage organizational culture of both adults and students. Or, how their curriculum, intervention, and assessment decisions are shaped by data. Comparing them objectively with structures within public school systems should be the work of reform minded ed schools and their researchers.

**Mark Sass says:**

*September 30, 2011 at 8:07 am*



So what do DSST and WDP do outside of having their over-worked under-paid 20 year-old novice teachers use SMART Boards while sipping lattes and kicking out low-income rule-breaking students who are temporarily-able? Can we dig a bit deeper and see if, perhaps, by chance, teachers are operating differently? Can we dig a bit deeper to see if what they do on a day-in-day-out basis makes the difference, a difference that has been rewarded with outside funding?

Charters were established to operate as laboratories of diverse educational approaches. Let's analyze the results.

**Tim Farmer says:**

*September 30, 2011 at 9:04 am*



This is a great article that highlights a very important point. While schools like KIPP are proving that any student from any zip code can achieve at a high level, what they are not doing is solving the human capital issue. Great schools will never be scalable until the teaching profession can be restructured, from recruitment to retention to retirement, to make it a highly attractive profession for the nations best and brightest. I have several friends teaching in KIPP schools, and they all agree that it is a temporary thing. If you are going to ask people to make those kinds of sacrifices, particularly once they start a family, you have to be able to compensate them accordingly.

To some of the earlier comments, I don't think the article is saying these schools can't scale, it is saying that they can't scale the way that they are currently operating. They have to innovate on their recruitment and retention of teachers. I have conversations with Charter School principals and EDs often, and they all are struggling to find talent. As more and more charter schools enter the market, great teachers are going to become more and more scarce. Something has to be done to deepen the talent pool, and even charters are going to have to change the way they compensate to make this happen.

**Alexander Ooms says:**

*September 30, 2011 at 9:36 am*



Mark – come for a visit; there is a lot to talk about here (and I thought your comment was funny, but fear others may think you are serious). I'll email you offline (and anyone else is welcome to as well).

**Leigh Campbell-Hale says:**

*September 30, 2011 at 4:48 pm*



Dear Mark,

I also encourage you to visit. I did. But please do so on your own and not with these teachers' bosses in tow. These Teach for America folks are temporary, and they're afraid to talk. The walls have ears there. Better yet, try to get to know one of the teachers personally before you go in and really hear what they have to say. They'll verify the contents of this article that the results are not scalable, at least not if the economy ever improves.

**Tim Farmer says:**

*September 30, 2011 at 11:11 pm*



The results are scalable, if they innovate and change some things. Other industries have proven that people are absolutely willing to work 80 hours a week, odd hours, give up weekends, whatever for years and years...WHEN THEY ARE COMPENSATED ACCORDINGLY. The problem is that the teaching profession as a whole needs to be completely revamped. The rules of the past, from salary schedules to ineffective evaluation systems, need to be thrown out the window. The ideal leader of this charge would be the unions, but they have proven they want to cling to the past, focus on teacher quantity instead of quality, and just hope that magically the profession will change itself. Charter Schools can play a strong role in providing innovation on this front, but most of them have just followed similar structures to the districts in which they sit. The Equity Project is a good example of what it is going to take (6-figure salaries) or School of One (blending virtual learning with traditional classroom experiences, redefining the role of a teacher). By and large, teachers in even high performing charters are paid based on years of experience, and sometimes a small performance bonus. It is going to have to be more innovative and dramatic than this to transform the profession and attract the 3 million high quality teachers we need to staff KIPP-like schools across the country.

**Alexander Ooms says:**

*September 30, 2011 at 11:43 pm*

## Student Retention vs. Social Promotion: A False Dichotomy

### Highlights

#### The Ultimate Goal

For all students to work to their potential and become productive, engaged citizens.

#### The Problem

Some children enter school significantly behind peers or fall behind once enrolled. Many never catch back up.

#### Symptoms of Problem

Social promotion keeps age groups together but fails to address substantial learning deficits.

#### Popular Response

Retain students who cannot pass high-stakes tests at key grades, such as third-grade reading.

#### Possible Unintended Consequences

Retained students are often placed back in the same environment in which they originally failed and many never catch up. Repeated failure leads students to become stigmatized and unmotivated. Students may be retained in grade for every subject after failing only one or two.

#### Keep Thinking

Retention is not the only antidote to social promotion. Other strategies focus on catching problems well before students must take high-stakes tests. They include: close monitoring begun in the earliest grades; frequent, high-quality classroom assessments to inform instruction; intensive tutoring tailored to specific needs; summer school and before- and after-school programs to provide extra learning time; and efforts to increase parental engagement. When students must be retained, schools can find creative ways to reteach the specific skills they failed while introducing new concepts to keep them engaged.





## Key Issues and Findings from the Research

Requiring students to repeat a grade if they cannot pass a high-stakes standardized test is an increasingly popular intervention in the age of standards and accountability. Grade retention is commonly used to end “social promotion” – passing students along without regard to their academic proficiency – with advocates holding that retention will provide the tools students need to keep up as they move through the grades, graduate from high school, and succeed in college or a desirable job. Such successful outcomes are important for the economic and social well-being not only of students but also of the communities where they live.

This brief looks at test-driven retention from several perspectives. It lays out the traditional arguments for and against retention, reviews the research on the effectiveness of some high-profile test-driven retention programs, and presents a framework for assessing the benefits and costs of retention. But it also seeks to do more. It raises questions, presents alternatives to retention, and challenges policy makers to think beyond common practices. For example, does holding children back so that they repeat the same material – often with little modification – make them learn more or faster? Does it restore their interest in school and motivate them to work harder? Or does it bore and discourage them? Why do many retained students eventually drop out? This brief seeks to help policymakers tackle such questions and weigh retention against other interventions in the interest of arriving at the best practices to help struggling students.

The theory behind retention is that students who have an extra year to learn material they failed to master the first time will emerge with stronger skills and a greater likelihood of academic success. Some also believe it gives socially and intellectually immature students a chance to catch up, while conveying the message that success requires hard work. From a pragmatic perspective, it also allows schools to narrow the range of skills in a classroom in the face of pressure to meet accountability standards. Retention is most commonly advocated for students lagging in reading and math, the essential foundations for learning other subjects. It is used most often in early grades when popular opinion holds that children are less likely to suffer ill

effects. For example, a growing number of states and districts advocate retaining students who cannot pass third-grade reading tests on the theory that reading skills must be mastered in the primary grades if students are to read and understand assignments in later grades.<sup>1</sup>

Opponents of retention counter that ill-effects are pervasive and serious, particularly when retention is used without other support services, such as summer school and tutoring outside of class. Negative consequences most often cited include social stigma, behavior problems, disengagement from school, and a greater likelihood of dropping out. Another concern is that retention is used much more frequently for certain groups of students: boys, African-Americans, Hispanics, and low-income students. Critics also note that because high-stakes testing often doesn’t begin until third grade, academic problems that surface in earlier grades can snowball by the time test-based policies kick in. They advocate identifying and addressing problems as soon as they emerge because reading problems become harder to correct as children age, and third grade might even be too late.

Retention has been heavily researched over the last several decades, and while most studies have found little if any academic benefit from retention it is important to note that many investigated policies that did not use test scores as the main retention trigger.<sup>2,3,4</sup> Policies based heavily on standardized test scores – in contrast to decisions by teachers who may consider academic performance in context with many factors, such as attendance, behavior, and parental consultation – may have different effects. Test scores provide a hard-and-fast standard that is clearly defined and less subjective than a teacher’s judgment, although using high-stakes tests may introduce different biases.<sup>3,4,5</sup> Objective testing standards are generally applied at “gateway” points to catch students as they move into upper elementary school from the primary grades or into middle school or high school.

Many researchers and education organizations argue that neither social promotion nor retention raises student achievement over the long haul and they urge policymakers to find different interventions. A 1999 report from the U.S. Department of Education stated:

*Does repeating a grade make children learn more or faster?*

*Neither promoting students when they are unprepared nor simply retaining them in the same grade is the right response to low student achievement. Both approaches presume that high rates of initial failure are inevitable and acceptable. Ending social promotions by simply holding more students back is the wrong choice. Students who are required to repeat a year are more likely than other students to eventually drop out, and few catch up academically with their peers. The right approach is to ensure that more students are prepared to meet challenging academic standards in the first place.<sup>6</sup>*

Thus, it is important when considering “promotion policies” to examine the extent to which they include a variety of supplemental services that are demonstrated to increase achievement. Such services may include early identification of academic problems, frequent monitoring through classroom assignments, specially designed summer schools, and tailored, intensive tutoring. Table 1 shows key services built into the policies of three large jurisdictions that use test scores in promotion decisions. It also shows that test-score triggers do not have to be absolute; factors such as parental appeals and alternative measures of student proficiency can also enter the equation.

**Table 1. Retention Practices in Florida and Chicago and New York City**

	<b>Year Begun</b>	<b>Grades Affected</b>	<b>Subjects Tested</b>	<b>Exemptions to Retention</b>	<b>Interventions and Services in Addition to Retention</b>
<b>Florida</b>	2002	3	reading	Exemptions are allowed for some students with disabilities or limited English, or students who demonstrate proficiency through portfolios or alternative tests.	Identification of reading deficiencies begins in kindergarten, with “intensive reading instruction” required immediately based on specific skills identified. Students in any grade not meeting testing standards must have an “academic improvement plan” that includes supplemental instruction or remediation. For third-graders the plan must identify specific areas of reading deficiency.
<b>Chicago</b>	1996	3, 6, 8	reading and math (plus writing for grade 8)	Exemptions are allowed for some students with disabilities or limited English. Parents can appeal retention decisions.	Summer school required for students who fail the test. Those who pass in August can be promoted. Each retained student must have an individual academic plan. Eighth-graders who are overage or have been retained before attend special schools that provide intensive skill development in reading and math and small classes.
<b>New York City</b>	2003	3, 4, 5, 6, 7, and 8 (phased in)	English language arts and math	Exemptions are allowed for students who produce portfolios of work deemed to meet promotion standards by teachers and principals. Exemptions are also allowed for some students with disabilities and limited English. Parents can appeal retention decisions.	Periodic monitoring of skills and use of interventions starts in primary grades. Beginning in grade 3, teachers identify students with lagging skills early in the school year, notify their parents, and work out an improvement plan. Students who fail the spring test or do not submit a satisfactory portfolio are encouraged to attend summer school. Those who improve sufficiently over the summer can move up in August. For students who are retained, teachers are required to develop an “instructional strategic plan” early in the school year and to conduct ongoing measures of progress.

Sources: Florida Department of Education; Florida SB 20-E; Chicago Public Schools; New York City Department of Education <sup>1,7,8,9</sup>

While the vast majority of research on retention looks at decisions initiated by teachers or administrators, most studies reviewed in this brief investigate more recent test-driven policies. This brief also only cites

*Studies in Chicago found mixed results from retention and some benefit from summer school.*

studies that used sophisticated designs to deal with selection biases that arise when students aren't randomly retained in grade or assigned to services, and those using longitudinal data to allow researchers to track the same stu-

dents over multiple years. One note of caution: even research using the best design has limitations. Several studies cited here measure student progress for only a few years, making them unsuitable for long-term projections. Some do not isolate the effects of special services such as summer school and tutoring from those of retention. Most fail to address whether alternatives to retention such as identification and remediation of problems in the earliest grades would have kept students on grade level and obviated the need for retention in the first place.

The available research provides some cautionary notes for policy makers. Several studies found that retention improved student achievement in elementary grades, at least in the short run, but no clear benefit was identified for older students and some studies found serious hazards, including an increased likelihood of dropping out. What is clear from most of these studies is that students are most likely to benefit if retention is woven into a safety net of well-designed services and is reserved for children who still struggle after receiving earlier interventions. Because a student's performance is affected by all parts of a policy, from retention triggers to summer school to appeal options, studies that disentangle the impact of specific components of a retention policy are most useful for crafting effective policy.

For example, a study of retention in Florida found that third-graders who were retained performed somewhat better than students who also had low scores but were promoted to the next grade, with particularly large gains appearing the second year after retention.<sup>10</sup> However, a key aspect of the Florida policy was the additional supports that students at risk of retention received. As noted in Table 1, deficiencies are identified early and targeted for specific help and schools do

not simply place students back where they were the previous year to get a rerun of the same instruction. When schools do place students back in the same situation in which they previously failed to thrive, there is little reason to believe they will experience extraordinary gains. Indeed, boredom may lead to behavior problems. A Chicago-based study conducted in-depth interviews of 22 retained sixth- and eighth-graders as well as their teachers and found that all but two students received essentially the same instruction during the repeated grade as they had the year before, an effect the authors called "recycling."<sup>11</sup>

New York City's promotion policy requires retention only after low-scoring students have received an academic year's worth of special services and have had repeated opportunities to meet the standard for promotion, either through improved test scores or satisfactory portfolios of work. In a study of this policy, researchers found that fifth-graders who received pre-retention services showed better-than-expected improvement on several measures, and that the few students who still struggled and were retained outperformed low-scoring peers who were promoted. The benefits for both groups lasted at least two years. One key observation was that students in schools that received more consistent or intensive services – i.e. one-on-one tutoring versus small group sessions – were more likely to improve. Also important, some part of the improved performance found by the multi-year study, including declines in the number of low-scoring students, could also have been due to an extensive network of reforms implemented by both the city and state.<sup>12</sup>

A study of third- and sixth-graders in Chicago Public Schools also noted the importance of support services in finding that summer school generally helped low-scoring students in both reading and math improve their scores in hopes of avoiding retention, and that the improvement persisted for two years. The authors surmised that the summer program's small classes, structured curriculum, and cadre of specially-selected teachers likely deserved some piece of the credit. However, that study and another of Chicago students in the same grades found that students who were retained did not fare as well. While third-graders showed some improvement in reading and math, sixth-graders showed no improvement or lost ground when compared to peers who were promoted. The second Chicago study concluded that neither retention nor social

promotion helped struggling students catch up, and noted that many students who qualified for retention showed very low achievement in the earliest grades raising the question of whether third grade was too late to begin interventions. The authors thus recommended identifying struggling students as early as possible for extra help.<sup>13, 14</sup>

A report by the National Research Council on appropriate uses of high-stakes tests advises against basing retention on test scores without also considering other evidence of a student's skill level such as grades, teacher recommendations, and extenuating circumstances.<sup>15</sup> Recommendations in the report include:

- If the test is supposed to indicate whether a student is ready for the next grade, make certain that scores “predict the likely educational effects of future placements—whether promotion, retention in grade, or some other intervention options.”
- Allow students to retake the test before a retention decision is made, even if that means creating an alternative form of the test.
- Provide alternatives to test-driven remediation such as early identification of learning problems coupled with proven remediation techniques.

## Current Practices & Policies

About 10 percent of U.S. students are retained sometime between kindergarten and high school. The largest numbers are in kindergarten and first grade, followed by second and third grades; black, Hispanic, and low-income students are most likely to be affected.<sup>16</sup> Policies requiring retention to end social promotion vary in several ways, including the grades at which students are retained and the kinds of services provided to help struggling students succeed.

Although several jurisdictions have test-based retention policies, Florida's is possibly the best known. The program was promoted by former Gov. Jeb Bush as part of his A+ Plan for education reform and was part of an extensive accountability system that included school report cards, performance based funding, and several options for school choice. Bush continues to promote his education policies as founder and president of the Foundation for Excellence in Education, which encourages other states to adopt some or all of Florida's policies.<sup>17</sup>

While Colorado currently does not mandate retention for students who score poorly on the CSAP, it does require third-graders to meet certain reading standards to be promoted as part of the Colorado Basic Literacy Act of 1997. The law also requires schools to monitor the progress of students in kindergarten through third grade toward meeting standards for literacy and reading comprehension and to create an “individual literacy plan” for students who are lagging. Those students must receive adequate instruction time to meet the prescribed standards, periodic reassessment, and placement in intensive summer tutoring if necessary.<sup>18</sup>

## What's Next?

Retaining large numbers of students is expensive, and policymakers deciding whether to use retention and/or other interventions should consider the potential costs and benefits of each course of action. Table 2 shows a possible framework using criteria suggested by the education economist Henry Levin.<sup>19</sup>

Additional cost-benefit considerations specific to test-based retention include whether any benefits to society at large are offset by the potential fairness issues for students who may not receive high-quality instruction in all knowledge and skills tested, especially given the greater likelihood of poor long-term outcomes for retained students. One scholar frames this question in ethical terms:

*I contend that current test-based retention policies so deeply frustrate the educational goals of public education, and infringe so heavily on the life chances of low-performing students, that they constitute an undeniable violation of fairness. Even if a net economic benefit results from a test-based retention policy for society as a whole—and whether such a net benefit exists is currently unknown—accepting such a benefit at the cost of a severe educational detriment for some students creates a breach of fairness that must be acknowledged and addressed.<sup>5</sup>*

This brief's discussions of potential costs and benefits are incomplete, however, because too little high-quality research exists yet to answer some important questions about retention definitively. For example, the studies discussed in this brief do not establish whether



**Table 2. Potential Costs and Benefits or Savings of Retention**

<b>Potential Benefits or Savings</b>		<b>Potential Costs</b>
<i>Repeated exposure to material could help retained students master the skills needed to reach grade level and stay abreast through graduation.</i>	<i>but . . .</i>	<i>Per-pupil spending increases by the amount required to educate each retained child for an additional year.</i>
<i>Students, parents, teachers, and school administrators could work toward a clear, easily understood standard for promotion.</i>	<i>but . . .</i>	<i>Basing promotion heavily on test performance may lead to a narrowed curriculum geared to material included on the test to the exclusion of other important but less readily measured outcomes.</i>
<i>If large enough numbers of students are retained in a given school, they can be assigned to the same teacher and given a curriculum and services tailored to their needs instead of being mixed in with children learning the material for the first time.</i>	<i>but . . .</i>	<i>Students who are retained may experience non-financial costs such as a feeling of stigmatization or a loss of self-esteem that can have real effects on future educational and labor market successes.</i>
<i>If retained students drop out, they consume no education funding for the years of high school – and college – not attended.</i>	<i>but . . .</i>	<i>If retained students drop out, their failure to complete high school is associated with several economic and social outcomes, including lower lifetime earnings, fewer taxes paid, fewer contributions to the economy, reduced political participation, consumption of more social services, greater health costs including for Medicaid, and increased costs related to crime and incarceration.</i>

retention improves student achievement in districts and subject areas beyond those considered by the researchers. More clarity is also needed on how much of any measured achievement growth is due to retention and how much it is due to other interventions included in policies.

Future research will be most valuable if it uses data that follow students over several years. Because the effects of retention can last long after a grade is repeated, it is important that researchers track each student throughout school. It is also important that each child's records be linked to other important information about family income and demographics as well as characteristics of teachers and schools. Such databases allow scholars to measure long-term effects and determine which features are most likely to turn struggling students around and put them on a path toward academic and life success.

The research literature contains several recommendations for alternatives to both retention and social promotion likely to improve students' academic performance and attitudes towards school. Attention to the specific needs of students and the quality of services is key. For example, schools may be able to avoid or minimize the need for remediation if they start measuring key skills and identifying academic delays, particularly with reading, in preschool and kindergarten and create age-appropriate interventions tightly targeted to the specific needs of each child.

Teachers who use frequent, high-quality benchmark tests and exercises throughout the school year can monitor student progress and tailor instruction to immediate needs as they arise. This practice also removes some pressure – and unwelcome surprises – from high-stakes accountability tests at the end of the year. Providing adequate training for teachers before they start using such assessment will improve their

ability to interpret assessment data in order to focus instruction on students' weakest skills.

The research also suggests some strategies to help struggling students, such as providing a fresh curriculum for those who are retained to prevent boredom. Intensive, focused tutoring in summer school and before- or after-school programs have been shown to help low-achieving students, whether they are retained or not. High-quality preschool can raise the odds children will start kindergarten with the skills they need. Finally, close monitoring of students who have been retained for problems such as disruptive behavior and

poor attendance can provide signs of disengagement from school, which can be an early predictor that a child is on the road to dropping out.

## About the Education Innovation Institute

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## Addressing Teacher Turnover

### Highlights

#### The Ultimate Goal

Attract and keep effective teachers in order to maximize student achievement.

#### The Problems

Replacing teachers is expensive. High exit rates from teaching contribute to teacher shortages, particularly in hard-to-staff areas. High turnover creates instability and harms student achievement, particularly for disadvantaged students.

#### Symptoms of Problems

Teacher shortages, reliance on out-of-field teachers to staff hard-to-fill jobs, unequal distribution of teachers within and between districts with newest teachers in most challenging schools.

#### Popular Responses

Provide bonuses for new recruits and stipends for teaching in hard-to-staff areas. Allow experienced teachers to move as they like within a district without sufficient consideration of individual schools' needs. Implement alternative certification programs to increase teacher supply.

#### Possible Unintended Consequences

When educators attribute staffing problems primarily to teacher shortages, schools risk failing to recognize and correct internal problems that can affect teacher turnover and student achievement.

#### Keep Thinking

Teachers don't work in a vacuum. They need to find schools that are a good match, so hiring based on both a school's needs and a teacher's interests and skills should improve satisfaction of both parties. A stimulating and supportive work environment can be at least as effective at retaining teachers as higher pay.



## Key Issues and Findings from the Research

Strong teachers are essential for bringing out the best in students which makes the retention of good teachers a top priority for schools. A recent report by the National Center for Education Statistics (NCES) found that 8 percent of the country's public school teachers left the profession in 2008-09 – three-fourths for reasons other than retirement – and another 8 percent switched schools.<sup>1</sup> That turnover of a half million teachers a year is expensive when schools have to recruit and train replacements. It also creates instability for students and the teachers who remain as they accommodate the newcomers' learning curves. While the percentage of teachers switching schools has remained fairly stable over the last two decades, the percentage quitting the profession has risen steadily.<sup>1</sup>

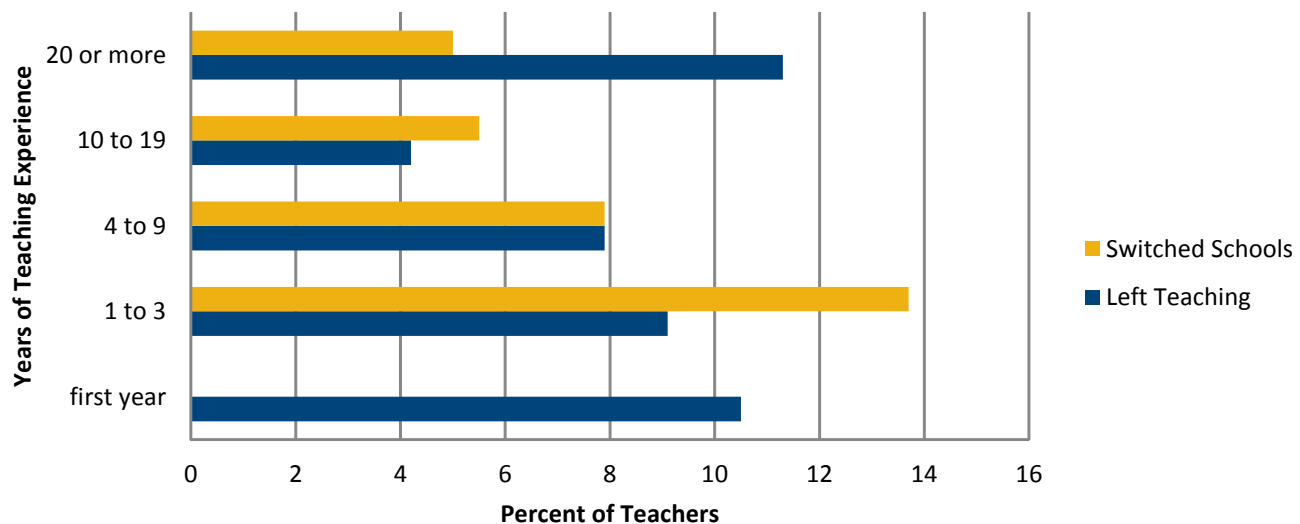
Moderate levels of turnover are not necessarily bad. Eight percent of public school teachers who switched schools or quit the profession in 2008-09 said it was because their contracts weren't renewed.<sup>1</sup> Any of those departures that sent ineffective teachers packing created opportunities for schools to hire replacements with fresh ideas and superior skills. But continuing high turnover can create a culture of churn that hampers academic planning and execution, disrupts ties between teachers and families, and can be indicative of underlying dysfunctions in the school.<sup>2</sup> Schools faced

with high turnover may find it hard to build a trusting, collaborative work environment and often have to bear the expense of repeated training and professional development for each wave of newcomers.<sup>3</sup> The accumulation of such effects can be particularly harmful for disadvantaged and low-achieving students.

Policy issues related to teacher retention fall into the broad categories of supply and satisfaction: ensuring that the personnel pipeline is adequate to keep up with demand and providing working conditions that will keep teachers happy enough to remain in the profession. The first category deals largely with the capacity of teacher preparation programs to staff all schools and disciplines. The second seeks to disentangle the reasons teachers leave and determine which interventions most effectively reduce attrition. Both touch on recruitment practices and financial factors such as salaries and bonuses. This document focuses mostly on the second category, leaving the first category for a future brief.

Teachers presumably decide to stay when their current job seems more attractive than competing alternatives. These alternatives can include moving to a different public school, shifting to a private or charter school, or switching to a different profession altogether, an option particularly open to math and science teachers. A trend in recent research has been to understand how turnover is influenced by the interplay of a teacher's characteristics, a school's organizational conditions, and student characteristics such as demographics and

Figure 1. Turnover by Years of Experience



Source: NCES  
Note: Data were not available for first year teachers who switched schools.



achievement levels.<sup>4</sup> Several studies have parsed out the characteristics of teachers most likely to switch schools or quit the profession, with some seeking to understand whether the highest or lowest quality teachers leave and what schools can do to retain their best teachers.

### Costs and Benefits

As with any policy or program it is useful to design a framework for computing the costs and benefits of implementation. Calculating the cost of teacher turnover is difficult, in part because some costs are not directly financial, such as the effect a new teacher's learning curve has on student achievement. A recent study used data from four districts in urban, suburban, and rural settings to identify categories of expenses and calculate the total cost of losing teachers.<sup>5</sup> The categories ranged from direct costs, such as recruitment, advertising, and hiring incentives, to derived costs for the share of training devoted to new teachers and share of administrative time spent replacing teachers. This latter piece included such tasks as closing out records for departing teachers, processing applications for job candidates, and placing new hires in schools. The estimated costs for each teacher who left the district ranged from just over \$4,000 in a small rural district in New Mexico to nearly \$10,000 in a suburban North Carolina district to nearly \$18,000 in the largest district, Chicago Public Schools. Multiplied by the number of teachers who quit each year, the total cost can become quite substantial.

Efforts to retain teachers also can be costly and should be compared with the costs of losing teachers. Several states offer financial incentives to attract and retain talented teachers or persuade them to work in schools with low-income or low-performing students. A typical example is a Washington state program that pays bonuses of \$5,000 a year to teachers certified by the National Board for Professional Teaching Standards (NBPTS) and an additional \$5,000 annually for working in a low-income school. A recent research report by the Center on Reinventing Public Education found that the cost of the bonuses has skyrocketed as more teachers have earned board certification, rising from less than \$10 million in 2007–08, to an estimated \$35 million in 2010–11 and a projected \$55 million in 2012–13. Increases of that magnitude invite scrutiny of the program's effectiveness, especially when states face budget shortfalls. Due to these rising costs, the

report found little net gain: only about 1 percent of board certified teachers had moved to challenging schools each year since a 2007 law authorized the \$10,000 total bonus, while almost as many eligible teachers had moved out of low-income schools in favor of ones with more affluent students. And while 94 percent of board certified teachers had remained at challenging schools since the bonus program began, that was only slightly higher than the overall retention rate for all teachers working in low-income schools statewide. This led the authors to question whether the bonuses were even necessary.<sup>6</sup>

But costs and benefits are tied to specific circumstances of programs and schools that use them. Studies in other settings have found that certain kinds of bonuses are cost-effective tools for keeping teachers in disadvantaged schools. For example, one team of researchers wrote that turnover dropped by 17 percent, on average, for certified math, science, and special education teachers in North Carolina who were paid annual bonuses of up to \$1,800 for continuing to work in secondary schools with concentrations of low-income or low-achieving students.<sup>7</sup> The program was most effective with experienced teachers, who the authors assumed may be more likely to raise test scores than new teachers.

### Young Teachers

Age and years of experience often emerge as drivers of teacher departure, with new teachers and teachers nearing retirement age among the most likely to leave (see Figure 1).<sup>2, 8</sup> Variation in the probability of leaving is due partly to changes in the competing demands of work and family as teachers age. An important part, however, is also due to instability at the beginning of a career created by district placement policies.<sup>4, 8, 9</sup>

Young teachers are typically placed in positions with a high proportion of disadvantaged students and/or in an undesirable location (with no adjustment in pay to offset these factors), often with little formal mentoring or support. If young teachers stay in the profession after this first experience, they gain seniority and move to a school with more optimal conditions.<sup>8</sup> Those teachers who don't survive the experience exit teaching altogether. Indeed, NCES reports that nearly 11 percent of new teachers and 9 percent with 1-3 years' experience quit teaching in 2008–09.<sup>1</sup>

High turnover among new teachers should be a mat-

ter of public concern because new teachers improve markedly during their first three years, and many leave before reaching their full potential. Even more important, the constant influx of new teachers in disadvantaged schools can be devastating for children, leading them to fall grade levels behind comparable peers in more advantaged schools. Maintaining high-quality young teachers in the profession generates a win-win for everyone: teachers work in their profession of choice; schools avoid a shortage of teachers; and students aren't guinea pigs for new teachers year after year.

The most worrisome type of teacher mobility occurs when highly effective teachers depart the profession. These moves aren't completely surprising because the skills that make a teacher successful in the classroom are likely to be valuable in other professions with higher pay. Some research suggests that this kind of mobility does indeed occur,<sup>10, 11</sup> but historically it has been hard to determine a teacher's quality from the available data because traditional measures like years of education are not strongly associated with student performance.

There are also reasons to expect the worst teachers to depart the profession. Unsuccessful teachers, by and large, know they are unsuccessful, and teaching provides them with little joy or personal reward. When an opportunity to do something different arises, they take it. There is recent evidence, using student test score growth as the measure of teacher quality, that teachers who leave urban schools tend to be among the weakest.<sup>12</sup>

While the question of whether teacher turnover is systematically dominated by high- or low-performing teachers is still up for debate, some schools certainly have undesirably high rates of turnover. A school's location and the makeup of its students all influence teacher mobility. Studies have found that beginning teachers are more likely to leave schools with high percentages of low-income or low-achieving students than schools with more advantaged populations, and some have found that turnover is higher in large urban settings than in suburban areas.<sup>10, 14</sup> One explanation is that many teachers choose to work near home or in schools similar to ones they attended.<sup>10</sup> Another is that working with disadvantaged students is more challenging, especially for inexperienced teachers.

One study that found higher turnover in schools of low-income and low-achieving students also found a strong link with poor working conditions, including bigger classes, deteriorating facilities, and textbook shortages.<sup>14</sup> Additionally, a study in Texas schools found that while low student achievement raised the likelihood of teacher turnover, race also had an effect, with higher enrollments of black and Hispanic students increasing the likelihood that white teachers would leave. Black and Hispanic teachers were less likely to leave as minority enrollments increased, however. This study also estimated salary differentials that might create enough incentive to offset large enrollments of disadvantaged students.<sup>15</sup> Pay is one of the more common reasons teachers give for leaving the profession and some studies have found that higher salaries can reduce turnover, particularly at the early and late years of teachers' careers.<sup>1, 4, 9</sup> Other studies find, however, that working conditions are more important than pay for many teachers.

### **Sense of Community and Support**

Understanding which characteristics of schools are most associated with high turnover can help district and school administrators plan more effective retention responses – especially when studies examine the relationships between certain characteristics of teachers and schools. Factors found to affect turnover include salary, class size, whether teachers participate in decision-making, school climate, and the presence of an effective induction or mentoring program.<sup>2, 4, 13, 16, 17</sup>

An important school characteristic is the presence of a professional community of teachers. One influential study on the causes of turnover found that perceptions of autonomy and inclusion in decision-making were associated with lower turnover. Teachers who quit were most likely to cite job dissatisfaction and a sense of limited opportunity, often because of inadequate administrative support, and problem students.<sup>2</sup> Some researchers have concluded that principals play an essential role in providing support and promoting a positive learning community.<sup>2, 17, 18, 19</sup> Examples include recognition of good work, instructional guidance, fair evaluations, clear communication of expectations, and consistent enforcement of rules.<sup>17</sup> Such findings are consistent with effective schools theory, which considers principals crucial for establishing collegiality and a strong learning climate. One tenet of this theory is that principals can attract and retain talented teachers

## Reasons Public School Teachers Left the Profession

<i>Personal life factors</i>	42.9%
<i>Other career factors</i>	14.8%
<i>School factors</i>	9.8%
<i>Contract not renewed</i>	5.3%
<i>Salary and benefits</i>	4.0%
<i>Student performance</i>	3.5%
<i>Other</i>	17.1%

Source: NCES

by forging a “unitary mission” focused on academics and hiring teachers with similar goals. They can then create conditions in the school that allow teachers to excel, such as including faculty in instructional decisions.<sup>20</sup>

The nurturing cocoon apparently can be spun too tightly, however. One researcher who has studied attrition extensively found the highest rates of teacher turnover in small private schools, particularly ones with a religious orientation – factors that could engender a unified mission and expectations of conformity. The author hypothesized that teachers who don’t agree with all parts of a mission might feel constrained in schools tightly focused on a purpose and may be more comfortable amid the greater diversity of ideas in a larger public school.<sup>2</sup> Clearly, the quality of the match between an individual teacher and a school is an important factor for keeping teachers happy in their work.

Well-designed induction and mentoring programs for new teachers also can be important. One study that examined such programs found that novices – a group at risk of high turnover – were less likely to leave schools where they had mentors matched to their subject area and group induction programs that allowed

## Aspects of New Job that Former Teachers Consider Most Superior to Teaching

- *Ability to balance personal & work life*
- *Autonomy/control over own work*
- *Recognition/support from superiors*
- *Salary*
- *Opportunities for advancement/promotion*
- *Professional prestige*
- *Intellectual challenge & manageable load (tie)*

Source: NCES

them to work with other teachers on such key duties like planning. Collaboration and support from other faculty and, to a lesser degree, school administrators raised the likelihood new teachers would stay.<sup>13</sup>

## Current Practices & Policies

While many states and local districts have programs in place to retain teachers, the content and reach of these programs varies considerably.<sup>21</sup> Mentoring and induction (also called orientation) programs for new teachers are popular, but as with any intervention, specific details of how they are implemented make a big difference in their success rates. Mentoring can range from occasional classroom observations and meetings with a senior teacher to carefully designed supervision with formal observation protocols and documentation. A full-scale induction program is more comprehensive, ideally including well-designed mentoring in addition to ongoing professional development, standards-based evaluations, and other features, such as access to a network of colleagues to assist with planning, classroom management, and other responsibilities. In 2007, over half the states had both mentoring and induction policies and at least another quarter had mentoring alone. While some states just established policies, more than half of those also required districts to actually implement a program.<sup>22</sup>

Colorado already offers – or is working to construct – some provisions that research has found effective at reducing turnover. For example, the state requires districts to provide induction programs that must be approved by the state. Further, the Colorado Department of Education’s (CDE) Educator Effectiveness initiative is in the midst of a teacher quality project that includes pieces on recruitment, induction programs for new teachers, and programs to support in-service teachers. One piece of the initiative helps schools and districts carry out “mutual consent hiring,” mandated under certain circumstances by the 2010 reform law Senate Bill 10-191, which requires that both the applicant and the principal agree that the applicant’s qualifications and experience match the school’s needs. Ideally, other teachers at the school help with the decision in a nod to shared decision-making.<sup>23</sup>

The Colorado Department of Education’s (CDE) Educator Effectiveness initiative, built in large part around

requirements of the reform law Senate Bill 10-191, provides practical advice on recruitment, induction programs for new teachers, and programs to support teachers on the job. For example, to help schools and districts carry out the state’s new requirement for “mutual consent hiring” the CDE initiative’s Web site provides a document by the Legacy Foundation and the New Teacher Project on interview techniques. An important part of CDE’s Educator Effectiveness initiative comes from how it is leveraging the new State Longitudinal Data System. The new data system will allow districts to determine which teachers are successful with which students and to better study retention patterns of different groups of teachers over time.

## What’s Next?

Given the importance of a high quality teaching force, teacher attrition, mobility, and retention are large and active areas of research. Numerous studies have investigated why teachers quit or switch schools from an array of angles, while others have gauged the effectiveness of various interventions designed to promote retention. While generalizations are hard to draw from such a large, diverse body of research, the best studies have produced evidence about characteristics of schools and teachers that are useful for policymakers to consider. Several are displayed in Figure 2.

Because retention programs vary among states and local districts, broad generalizations about current

practices also are difficult. However, a close reading of high-caliber research can help explain why a given program did or did not work in the locations studied.

**Figure 2. Actions to Promote Stability**

Condition	Responses Found Effective in Research
Young or beginning teachers	Well-designed induction programs and mentoring; support from administrators and colleagues
Low-income or low-achieving students	Adequate stipend to compensate for instructional challenges; good working conditions, shared decision-making, and respect from administration to keep high-ability teachers in the school
All types of teachers	Competitive pay; participation in decision-making; supportive administration; strong professional community; autonomy

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## Recommendations for Policymakers

- *Leadership matters. Principals can foster a strong professional community by promoting autonomy, communicating expectations clearly, encouraging collegiality, creating a fair evaluation process, providing instructional support, and recognizing good work.*
- *Positive school organizational conditions, such as manageable class sizes and shared decision-making, also can improve retention.*
- *Induction programs for new teachers are most successful if they provide mentors matched by subject area, support from colleagues with tasks like planning, and regular opportunities to meet with other new teachers to share needs and experiences.*
- *Although teachers often rate working conditions as more important than salaries, competitive pay can undercut the allure of other jobs requiring similar levels of education.*
- *Conducting cost-benefit analyses can help districts ascertain the full cost of replacing teachers who leave and analyze whether expensive incentives have the desired result.*
- *Maintain good data to observe changes in turnover among districts and over time. Analyses of the characteristics and costs of turnover are possible only if a district keeps longitudinal data that is detailed and organized to study turnover.*



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NOTE: The citations below are hyperlinked to their source, simply click on the blue citation title.

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## School Finance: A Primer

### Highlights

#### The Ultimate Goal

Adequate, equitable, and efficient funding for all levels of education that allows all students to perform to the full extent of their abilities.

#### The Problems

Tax structures are stressed by economic fluctuations.

Enrollment growth and unfunded mandates create pressures for increased education spending.

Many schools do not produce desired levels of achievement, spawning public criticism and scrutiny.

#### Symptoms of Problems

Absent external constraints taxes rise and school budgets grow.

Taxpayers protest and demand improved performance by schools.

Revenues fluctuate with the economy, making planning difficult and necessitating cuts in down years.

#### Popular Responses

Voters adopt ballot measures to limit tax increases.

Residents of low-income districts file litigation.

Legislatures and courts issue orders designed to ensure equity and/or adequate funding, often shifting some level of education funding – and oversight – to the state.

#### Possible Unintended Consequences

Ballot initiatives, legislation, and court orders can lead to patchwork of contradictory taxation and funding requirements.

Shifting more K-12 funding to the state squeezes other services, including higher education.

Tax limits and cuts can fuel budget gaps during recessionary years.

#### Keep Thinking

Consider proposing a constitutional amendment to overhaul the state tax structure, including provisions of TABOR and Amendment 23, to establish more stable and predictable state and local revenue streams.

Revise funding mechanisms to promote practices found to improve achievement instead of basing appropriations on inputs like enrollment.

Establish adequate funding levels for higher education and guarantee minimum annual shares of the total state budget.

## Key Issues and Findings from the Research

Financing education is an integral part of any state's tax structure and budget process. Most states, including Colorado, rely on some mix of local, state, and federal funds to finance elementary and secondary schools. The balance among the three sources varies greatly from state to state, however, depending on laws, court rulings, and, to varying degrees, the demographics of the state's population, characteristics of its schools, its historic attitudes about education, and economic factors.

Even in austere budget years, education enjoys more popular support and legal protection than many other state services. Opinion polls consistently show high support for education, and proposals to cut spending on schools predictably generate public protests. Most state constitutions contain some requirement to provide an adequate and/or equitable K-12 education, giving elementary and secondary schools a mandate usually not shared even by the colleges and universities attended by K-12 graduates. One result of this protected status, fueled in part by increased accountability demands, is that nationally per-pupil spending in K-12 has risen over the last century by an average of 3.5 percent annually in inflation-adjusted dollars.<sup>1</sup> This steady expansion has spawned searches for revenue that often resulted in funding apparatus that buckle during recessions, revealing stress fractures throughout the entire revenue structure.

Education has been primarily a local enterprise through much of U.S. history, with local governments raising the majority of revenue to pay for schools, generally relying mostly on property taxes. A leading

*Heavy reliance on property taxes can create inequities between rich and poor districts.*

benefit of this system is that it allows a high degree of local control. Taxpayers live close to their neighborhood schools and, in theory, weigh how much they value education when choosing a home. In theory, families that put great value on education can live in districts with high property taxes and high-performing schools; those who value it less and/or who want to pay lower taxes can live elsewhere.

Using property taxes to pay for schools also creates divisive equity issues, however. Districts in areas with expensive personal and commercial real estate can raise more property tax revenue than other districts and provide better schools. The existence of identifiably rich schools and poor schools means that differences in educational quality and opportunity often track with differences in wealth. Further, students with the greatest educational disadvantages often are low-income and live in areas of low property wealth. Thus, districts with the costliest students to educate often have much less capacity to raise tax revenue.

Since the middle of the 20th Century, states have played a bigger role in school finance, usually dedicating revenue from some combination of income, sales, and business taxes.<sup>2</sup> In recent decades lotteries have become a popular source of education revenue in many states, although schools are most likely to benefit if proceeds are specifically earmarked for education – and even then some of the added revenue is often siphoned off for other state functions.<sup>3</sup> Some states earmark selected revenue sources – such as a statewide property tax in Michigan – in an effort to guarantee specified levels of education funding. State money is dispensed primarily in two forms: foundation allotments, based on a minimum per-pupil rate applied to all students, and “categorical” funding, special payments for students who are disabled or low-income or have other disadvantages that make them more expensive to educate. This structure is designed to dedicate more money to needier students, although states and districts sometimes thwart the intent of these policies by also sending more unrestricted money to wealthier districts so that disadvantaged students end up with little if any net boost in funding. Thus, even if funding is more equalized among the districts in a state, inequities often still exist between schools.<sup>4</sup>

### Litigation and Ballot Initiatives

States – and to a lesser degree the federal government – began augmenting local education revenues in part out of concern over the inequities associated with relying on property taxes and to compensate for the disadvantages of needy students. But the supplements were insufficient to level the funding field, so beginning in the 1970s advocates for students in low-wealth school districts sued to achieve more equitable funding. Advocates found the greatest success in state courts which generally required legislatures to find ways to

“equalize” funding across all districts. But even after states overhauled their school finance structures, the total levels of funding still were insufficient to support reasonable levels of student achievement.

As a result, school finance litigation and legislation in recent decades have turned to ensuring that funding is adequate for students to meet desired academic standards. The shift in focus to adequacy has raised the question: What is “adequate” and how should it be measured? Thus, defining the components of an adequate education is a difficult yet essential element of any school funding system.

An increasing number of states are conducting adequacy studies, and researchers offer a variety of approaches. Some scholars recommend basing adequacy standards on the judgment of education professionals, sometimes combined with research findings, with costs then based on those standards.<sup>5</sup> Others derive standards from research on school-wide reform strategies.<sup>1</sup> A third approach uses a so-called outcomes-based foundation plan that requires funding to be based on a formula that considers the cost of achieving certain performance goals in different types

*Adequacy debates center on whether schools have enough funding to produce expected results.*

of districts.<sup>6</sup> Whichever approach is used, several authors advised against relying mostly on test scores as performance indicators. Some suggested variables like whether students graduated or earned college prep diplomas, while others recommended calculating

the cost of interventions found effective by research, such as small primary grade classes, one-on-one tutoring, and the use of formative assessments and performance data to improve learning.

### Tax and Spending Limits

California’s Proposition 13 did not inaugurate tax limits; they have existed throughout American history. But Prop 13’s passage by voters in 1978 set off a cascade of ballot referenda and legislation in other states that played a major role in shaping the school finance systems we have today. Within a few years of Prop 13’s passage, nearly all states had adopted some kind of limit on taxation and/or spending, with a majority aimed at property taxes.<sup>7</sup> Like all aspects of school

finance, voter initiatives have varied greatly from state to state in their structure and details, but in most cases they were motivated by a desire for greater efficiency in government, not a reduction in services. However, reduced services often have followed.

### Shift from State to Local Funding

The layers of court orders, legislation, and ballot initiatives have created a complex set of metrics for education budgets, and generated some unforeseen consequences. One major effect of school finance equalization efforts, adequacy legislation and litigation, and tax and spending limits has been to shift education funding responsibility away from local governments and to the states, as Table 1 shows.

**Table 1. Sources of revenue for public schools**

	Federal	State	Local
<b>1919-20</b>	0.3%	16.5%	83.2%
<b>1955-56</b>	4.6%	39.5%	55.9%
<b>2007-08</b>	8.2%	48.3%	43.5%

Source: National Center for Education Statistics<sup>8</sup>

As states provided a greater share of K-12 funding, they also imposed rules and policies in areas such as curriculum, testing, student promotion, graduation requirements, budget practices, and, sometimes, how specific resources could be used. This shift in power to the states from local governments has raised questions about whether states really are better equipped to provide an equitable, accountable, effective, and efficient education system.<sup>4</sup> It also has generated discontent among some local policy makers, educators, and parents, as well as taxpayers in property-wealthy districts.

### Broader Effects, Including on Higher Education

Another effect of shifting a greater share of school finance to the state is that it can impinge on funding for other state services. States must produce new sources of revenue – a lottery, for example – to balance the outflow of general fund money for schools, or other services will suffer. Ironic examples occur when other services serving youth, such as child welfare or higher education, are cut to preserve funding for elementary and secondary schools. Reductions to higher education can appear less harmful than other cuts because colleges have other steady sources of revenue, including tuition, fees, and federal grants. But acceptance of tuition as a flexible revenue source stirs debate



about the level of financial responsibility students should shoulder for higher education, how much debt is reasonable, and whether high tuition rates curtail access for low-income students. Nationally, state and local funding per full-time equivalent student (FTE) dropped more than 5 percent between 1998 and 2008 for public research universities, on average, while net tuition revenues per FTE rose an average of 45 percent over the same period.<sup>9</sup> (All calculations used inflation-adjusted dollars.) The authors explained that while the 2001 recession led to expected drops in appropriations and increases in tuition, tuition continued to rise at

*As states have provided more funding they have assumed a greater policy-setting role.*

public four-year institutions -- though not at community colleges -- after state funding recovered.

Similar figures were not provided for Colorado, but a different report from the University of Colo-

rado noted that higher education's share of total state funding has dropped from 21 percent in 1979 to 6.4 percent in 2009-10, excluding funds from the American Recovery and Reinvestment Act of 2009 (ARRA). Yet another report showed that net tuition revenue per FTE for Colorado's public colleges rose 28 percent between 2004-05 and 2009-10, and in that final year the state ranked eighth in the country in the percent of total higher education revenue that came from tuition. In 2010, the legislature passed a bill giving each governing board authority to set tuition rates -- within prescribed limits -- for fiscal years 2011-12 through 2015-16.<sup>10, 11, 12, 13</sup>

Finally, a very important consequence of an accumulation of school finance requirements from ballot initiatives, legislation, and court rulings is that they can result in contradictory orders for a state to limit spending and increase appropriations to ensure adequacy at the same time. This is the situation Colorado now faces.

## Current Practices & Policies in Colorado

The Colorado Constitution requires the legislature to provide "a thorough and uniform system of free public schools."<sup>14</sup> Financing for this mandate comes from state and local sources in a tax structure shaped by

layers of ballot initiatives and legislation. Most state revenues come from sales and income taxes, both of which are sensitive to fluctuations in the economy, making it hard for agencies to predict revenues and provide consistent service levels. Because of the state's decentralized local government tax structure, Coloradoans historically paid relatively low state taxes and relatively high local government taxes.

School districts draw first from local property and vehicle registration taxes. All local revenues remain in a school district; none are transferred to other districts, as happens in some states. If assessed property values don't generate enough revenue to reach state mandated levels, the state makes up the shortfall. Because local tax revenues have been constrained, the state's share of K-12 funding grew from about 44 to 63 percent of the total between the mid-1980s and 2009, although percentages vary widely among local districts because of differences in property wealth and tax rates.<sup>15, 16, 18</sup>

Colorado falls below the national average on several key school finance measures. Table 2 shows this is true for expenditures and revenues per pupil, as well as for revenue collected per \$1,000 of residents' personal income, a measure indicating the level of personal wealth devoted to education.

**Table 2. Colorado's Rankings on Selected K-12 Finance Indicators (2007-08)**

	Colorado	U.S. Avg.
Operating expenditures per pupil	\$9,152 (35)	\$10,297
Instructional expenditures per pupil	\$5,795 (35)	\$6,778
Total revenue per pupil	\$10,118 (40)	NA
Total revenue per \$1,000 personal income	\$39 (49)	\$49

Sources: National Center for Education Statistics; U.S. Census Bureau<sup>21, 22</sup>

Notes: Rankings are in parentheses and include 50 states and District of Columbia. Operating expenditures cover day-to-day operations (salaries, supplies, and purchased services) and exclude construction, equipment, property, debt services, and programs outside of public elementary and secondary education such as adult education and community services.

Table 2 uses data from 2007-08, but spending has dropped since then because of the recession. Starting in 2010-11, Colorado introduced a change to the per-pupil formula called the "state budget stabilization

factor” that reduced state funding to districts by about 6.35 percent for that year.<sup>15</sup>

The stabilization factor was only the most recent patch applied to Colorado’s school finance calculations,

***TABOR and Amendment 23 create conflicting requirements.***

however. The main pieces in Colorado’s patchwork are the Gallagher constitutional amendment approved by voters

in 1982, the Taxpayer Bill of Rights (TABOR) approved by voters in 1992, Amendment 23 approved in 2000, and the Mill Levy Freeze Bill passed by the legislature in 2007.<sup>18</sup>

The Gallagher Amendment limits assessed values of residential and nonresidential property and mandates that residential property account for less than half the state’s total property assessed valuation.<sup>23</sup> As a result, residential property carries an assessed valuation that is equal to only 7.96% of its actual value. Assessed valuation provides the base for local property taxes. Local governments set a tax rate – called “mills” – that is one-tenth of 1 percent (.001) of assessed valuation.<sup>15</sup>

TABOR limits increases in state spending to the Consumer Price Index and population growth of the preceding year, or enrollment growth in the case of schools. If the tax base – and, hence, revenues – drop sharply during a recession, recovery to pre-recession levels can take years because of the growth limit. TABOR allows voters to permit state and local governments to raise taxes and spend revenues exceeding the TABOR limit. A revision approved by voters in 2005 allowed the state to keep and spend all revenue collected above the limit between 2005-06 and 2009-10. Although a cap on excess revenue kicked in after 2009-10, policymakers hoped the respite would prevent a sharp drop in revenues from the recession.<sup>19, 23</sup>

Amendment 23 was intended to bolster state funding for public schools after revenues eroded under TABOR. The ballot initiative required the legislature to dedicate a specified amount of income tax for education, increase state funding by at least the rate of inflation plus one percentage point through 2010-11, and set a minimum rate of increase through that year. Funding must increase by at least the rate of inflation after 2010-11.<sup>17</sup>

The 2007 Mill Levy Freeze Bill (Senate Bill 07-199)

further altered the balance of revenues between state and local sources by allowing most local districts to keep the same tax rate as the previous year’s if voters had approved waivers to exceed the TABOR limits. Thus, most districts retained their 2006-07 rates instead of dropping the mill levy if property valuation increased. The bill also capped tax rates at 27 mills. The net impact was to increase the annual local share of school funding by about \$115 million to \$200 million during the bill’s first three years.<sup>15, 20</sup>

One last piece of the K-12 funding picture is a pending adequacy lawsuit, Anthony Lobato et al. v. State of Colorado, et al., that claims TABOR and the Gallagher amendment violate the education requirements of the state constitution and argues that the state has treated Amendment 23’s required appropriations increases as a maximum funding level instead of a minimum. It asserts that the constitutional amendments should yield to the intent of the constitution’s original language.<sup>24</sup>

Colorado’s tax structure, including the provisions for K-12 finance, has created the predicted squeeze on higher education. Public colleges and universities experienced disproportionately large drops in state funding during the two recessions of the last decade. The state backfilled recent losses with tuition increases and hundreds of millions of ARRA dollars. The reliance on ARRA was so great that Colorado’s colleges and universities wound up with the country’s largest share – 43 percent -- of their total appropriations from stimulus funds.

***ARRA provided temporary help that states now must replace.***

Thus, although appropriations per FTE increased by 20 percent between 2004-05 and 2009-10, higher education will experience a drop unless the state finds money to replace the ARRA funds.

Problems with education finance, always a big policy issue in Colorado, promise to keep stirring debate through the summer and fall of 2011 as the recession continues suppress tax revenues. After the 2011 legislative session resulted in another large funding cut for both K-12 and higher education, talk began to emerge from different groups about new efforts to reform tax structures either through piecemeal measures or sweeping constitutional revisions. Changes could also come if courts rule on the adequacy lawsuit.<sup>25</sup>

## What's Next?

Concerned about continuing gaps in student performance and adequacy of funding levels, scholars and advocates have proposed completely reworking current systems. In Colorado, for example, some reformers want to make it harder to change the state constitution so school finance issues will be coordinated rather than instituted piecemeal through initiatives like the Gallagher Amendment, TABOR, and Amendment 23.

Others recommend blowing up traditional funding formulas, given that research findings produce no clear consensus on such fundamental questions as whether state controls or local flexibility produce the best educational results – or even whether more money improves student achievement. One paper recommends rewarding behaviors and practices by school personnel that have been shown to improve student

*Education finance promises to remain a hot topic in Colorado.*

achievement. For example, instead of linking teacher salaries primarily to credentials and seniority – or test scores – states and districts could reward teachers who provide evidence of using

data and formative assessments effectively to improve instruction. School-level bonuses could reward low staff turnover in addition to student achievement.<sup>4</sup>

Another researcher proposes turning the current system on its head by basing a school's appropriation on the specific, current needs of its students instead of opaque calculations by the district for services, programs, and salaries. Schools with high-needs students

would get more money and be held accountable for meeting performance standards. Schools would have greater latitude in spending decisions – whether to hire more teachers at lower salaries or experiment with instructional approaches, for example – in the belief that such decisions belong at the level closest to students. The proposal establishes achievement standards as the ultimate goal and works from

*Fixing current problems could require extensive changes.*

the premise that a funding system is not equitable if certain groups consistently underperform. Thus, the plan aligns funding decisions, standards, and accountability. It also includes market forces allowing for the replacement of instructional programs or even schools that fail to produce the desired results. Finally, and maybe most importantly, it encourages system-wide transparency based on the production and informed use of fiscal and student performance data to measure student performance, gauge the effectiveness of schools and programs, and compare costs and efficiency.<sup>26</sup>

## About the Education Innovation Institute

The Education Innovation Institute, created in 2009 by the Colorado General Assembly, identifies and interprets the nation's best research on current education issues to help shape policy and reform. It is housed at the University of Northern Colorado, a leader in teacher education since 1889. For more information about EII and its work, visit [www.unco.edu/eii](http://www.unco.edu/eii).

## Recommendations for Next Steps

- *Investigate the feasibility of stabilizing Colorado's constitution by changing the initiative process while also overhauling the state tax structure, including tax and spending limits and required funding increases, to establish more predictable state and local revenue levels.*
- *Investigate K-12 funding frameworks that base appropriations on the cost of delivering desired outcomes such as specific achievement goals instead of inputs such as enrollment or teachers' credentials.*
- *Consider imposing penalties on school districts that thwart the purpose of extra categorical funds for high-needs schools by increasing base funding to low-need schools.*
- *Consider strategies that establish minimum funding levels for public higher education and tie annual increases to an external indicator such as the rate of inflation.*
- *Consider limiting the size of annual tuition increases to the same indicator.*

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## For More Information

These reports and Web sites provide more detail about school finance history and practices.

### National Sources:

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[National Conference of State Legislatures, Education information](#)

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[Colorado Department of Higher Education, Budget and Finance](#)

[Colorado Legislative Council: Education issues page](#)

[House Education Committee information](#)

[Senate Education Committee information](#)