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Creating a 21st Century Framework for Student Learning: Integrated Design Options for Learner Performance and Teacher Pay for Performance

*Draft Report and Recommendations
Prepared for the Institute for Tomorrow's Workforce*

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Introduction

The Institute for Tomorrow's Workforce, on behalf of the state of Iowa, charged Learning Point Associates with studying and developing recommendations for systemwide educational reform and for a teacher compensation and performance design focused on helping Iowa prepare all learners for the 21st century. In response, this report and series of draft policy recommendations addresses two components of that charge: (1) teacher compensation, particularly pay for performance; and (2) learner performance.

Learning Point Associates eagerly assumed this responsibility. Efforts to solicit statewide public comment were immediately organized. These mechanisms included focus groups of educators and community members, phone surveys with a sample of approximately 600 Iowans, and interactive meetings with advisory work groups created to provide objective and thoughtful comment. The result has been a wide range of useful insight into Iowans' views on teacher pay for performance and learner performance that Learning Point Associates has taken into consideration while drafting this report and the suggested options for change.

According to a representative sample of phone surveys (Selzer & Company, 2006), Iowans are ready for a deliberate change in education and they want to understand the benefits, both short term and long term. Iowans perceive the state to be good at public education but not necessarily excellent. Two in three Iowa voters (68 percent) say the quality of public education in Iowa is adequate; 25 percent say it is not adequate, and 7 percent are not sure. Iowa's public officials and citizens desire higher achievement and greater workforce relevance for their public school students. A majority of respondents also prefer that Iowa teachers be paid more.

Is there a means by which both can happen? Are there policy alternatives that might possibly propel higher student performance and simultaneously link student performance to teacher remuneration? One possible answer is to address the issue of elevated student achievement and higher teacher remuneration by linking the two through a system of fair, understandable, and practicable teacher pay-for-performance measures aimed at further professionalizing and even more intensely engaging Iowa's classroom teachers. Several school districts and states have implemented pay-for-performance designs, including Denver (ProComp); Minnesota (QComp); and, recently, Florida (STAR). All three examples include a learner performance or student growth aspect to the design. The weight of the research evidence regarding pay-for-performance strategies is favorable, both from the private sector and from education settings. However, the number of empirically based research studies in education, even if positive in outcome, is slender. Significant details remain unknown.

The remainder of this report is representative of informed guidance for the kinds of objectives and principles to consider achieving for this endeavor. The report includes the following sections:

- Section 1 contains background information describing prior and present teacher pay-for-performance arrangements specific to the state of Iowa. In 1987, and again in 2001, teacher professional development and performance appraisal arrangements were partially implemented by the Iowa Department of Education. These plans, though neither fully

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funded nor fully implemented, leave an operational legacy upon which important additional advances likely can be constructed.

- Section 2 addresses the role of standards, curricula and performance measurement in supporting student growth and informing instruction in Iowa. These three aspects of Iowa's education system are critical and, if aligned, will better serve all Iowa learners.
- Section 3 includes a description of the student performance and professional pay challenges that presently need to be addressed as well as perspectives on pay for performance as it is presently, and rapidly, evolving in U.S. education policy circles.
- Section 4 outlines draft recommendations for a mixed model of teacher career-ladder and performance incentives suitable for implementation in Iowa. It also presents an explanation of infrastructure additions to Iowa testing, measurement, and data collection that eventually will be necessary if teacher pay for performance is to be diffused more broadly throughout Iowa's education system.

Section 1

The Challenge and The Opportunity: Evolving Education Contexts for the Nation and for Iowa

The success of its students has always been an utmost priority for the state of Iowa. The state has a long history of extending efforts toward increased student achievement, particularly through the quality of its teachers. Specifically, Iowa has had two major efforts focused on teacher pay for performance that sought to impact student achievement. For a variety of reasons, both efforts were unsuccessful overall. At a crossroads now, Iowa again seeks to take the next step in keeping its education delivery system innovative and responsive to the needs of the community, particularly preparing students for the 21st century. The work of Learning Point Associates seeks to capitalize on the experiences described in this section and help make educational aspirations a reality.

Learner Performance in Iowa: An Overview

Iowa's public schools have served the state well for decades and continue to do so (Battelle, 2006). As technologies improve, Iowa continues to refine its ability to measure the performance of its students. Iowa benefits from its long-term collaboration with two premier assessment developers, the Iowa Testing Program at the University of Iowa and ACT Inc. The state's current performance measures include the Iowa Tests of Basic Skills (ITBS), the Iowa Tests of Educational Development (ITED), the Iowa Tests of English Language Learning (ITELL), and the ACT.

Some recent flattening of trends in student performance on these measures suggests now is an opportune time to reconsider what is taught in Iowa's schools and how it is taught. As we look to the world that Iowa wants for its youth, the disparity widens between what is taught and learned now and what should be taught and learned to support them in their adulthood. If the point is an educational system that better prepares all Iowa's students, the focus must first be on teaching. Teaching will need to be different, deeper, more effective, and more productive.

Iowa's current performance measurement system focuses solely on student outcomes. This limits Iowa students' and educators' understanding of the processes that support learning over time. To monitor and enhance student growth as well as teacher instruction, a major recommendation of this report is for Iowa to measure teacher instructional processes in addition to student outcomes. By capturing both student and teacher performance information, Iowa's education system will be better equipped to support and serve its students. Such a measurement system will provide Iowa's teachers with local data to inform local practice and will empower them to make well-informed decisions about how best to scaffold each student's learning.

The options suggested by Learning Point Associates are designed to inform Iowa's thinking about how to fairly and reliably measure student and teacher performance over time so that the Iowa educational system may better serve all learners.

Teacher Pay for Performance in Iowa: An Overview

As previously mentioned, Iowa has had two major efforts aimed at changing teacher pay and implementing pay for performance: one that began in 1987 and a second one in 2001. Below is an overview of each effort, including the goals of the effort as well as its successes and failures.

1987: The Educational Excellence Program

In 1987, the Iowa Legislature approved the Educational Excellence Program, which became effective July 1, 1987 (fiscal year [FY] 1988). The program was geared toward increasing teacher pay in the state. The Iowa Legislative Fiscal Bureau (1997) announced, “A standing appropriation of \$92.0 million was provided to fund the program, however, actual expenditures for FY 1988 were \$86.1 million” (p. 1).

At the outset, the Educational Excellence Program consisted of three phases:

- **Phase I—Increase Minimum Teacher Salaries for Recruitment of Quality Teachers.** “Phase I was designed to bring the minimum teacher salary up to \$18,000 in order to recruit quality teachers. ... A total of \$11,125,590 was expended for Phase I in FY 1988” (Iowa Legislative Fiscal Bureau, 1997, p. 1).
- **Phase II—Supplement Teacher Salaries for Retention of Quality Teachers.** Phase II was designed to supplement the pay of teachers in school districts and area education agencies to encourage the retention of quality teachers. “A total of \$36,614,055 was expended for Phase II in FY 1988.... Phase II generated approximately \$1,100 per teacher on a statewide basis in FY 1988” (Iowa Legislative Fiscal Bureau, 1997, pp. 1–2).
- **Phase III—Utilization of Performance Pay to Enhance Quality and Effectiveness of Teachers.** The largest portion of funds under the initiative went to Phase III, which was designed to enhance the quality, effectiveness, and performance of Iowa’s teachers by promoting teacher excellence. These funds were to be supplemental or performance-based pay in addition to regular salary schedules for teachers that require additional instructional work assignments. To qualify, individual plans aligning with state criteria were to be submitted by a district or area education agency (AEA) and approved by the Iowa Department of Education. In addition, participating teachers also had to have an individual plan that linked to the district’s plan. “In FY 1988, \$38,372,425 was expended on Phase III” (Iowa Legislative Fiscal Bureau, 1997, p. 2).

As a result of the Phase III component of the initiative, 477 Iowa school districts submitted plans for hikes in teacher pay—tapping funding for Phases I and II of the program. “To qualify for a share of the additional \$42 million [Phase III], districts had to develop plans that based the raises on performance, additional work loads, or additional academic coursework” (Flax, 1988). Most of the approved plans, which had Phase III components, called for higher pay for additional work or advanced training *only*. Phase III was discontinued during the 2003 legislative session amid decreasing funding and legislative discomfort with the direction of the program and the lack of linkage to student performance.

2001: Student Achievement and Teacher Quality Program

During the 2001 Iowa legislative session, the Student Achievement and Teacher Quality (SATQ) program was established through Senate File 476 (2001). At this point, beginning teacher salaries had risen from \$23,000 to \$24,500. SATQ created several components, including the following:

- Mentoring and induction for beginning teachers and administrators.
- Eight Iowa teaching standards and 42 criteria defining expectations for all teachers.
- The first part of a new four-level career ladder based on skills and knowledge—not experience and degrees. The four levels of the career ladder were Beginning, Career I, Career II, and Advanced.
- An increased minimum salary level for beginning and Career I teachers (participating districts were required to raise beginning teacher salary by \$1,500 per year until the district minimum teacher salary hit \$28,000).
- Team-based variable pay pilots—three different groups of pilots completed in three different years.

The career ladder and the team-based variable pay are discussed further.

Career Ladder. Districts could choose to adopt the career ladder system. Teachers were to be promoted one level at a time and remain at a given level for at least one year before being promoted to the next level. Table 1 provides an overview of the career ladder levels.

Table 1. Description of Career Ladder Levels

Level	Description
Beginning	First two years of teaching. Must hold a provisional license, have completed a preparation program, and participate in a beginning teacher mentoring and induction program, which participating districts must offer. Must complete mentoring program and induction to move to next step.
Career	Begin work on an individual professional development plan. District must create a \$2,000 differential between the average Beginning teacher salary and the minimum Career teacher salary. Career teacher has completed induction, a comprehensive evaluation, holds a license, and demonstrates competencies of a Career teacher.
Career II (never activated)	Career II teacher may become a mentor or a supervisor of student teachers. Participating districts should establish a minimum salary for a Career II teacher that is at least \$5,000 greater than the minimum Career teacher salary. Career II teachers should complete an individual development plan and receive a comprehensive evaluation every five years. Teachers may remain at the Career II level.
Advanced (never activated)	A Career II teacher must submit a portfolio of work aligned with the Iowa teaching standards for a review panel and must demonstrate superior teaching skill to attain Advanced status. Participating districts should establish a minimum salary for an Advanced teacher that is at least \$13,500 greater than the minimum Career teacher salary.

Source: Education Commission of the States (2001)

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At the point of SATQ creation, it was intended that Career II and Advanced levels were to be activated later. However, funding was never allocated to implement Career II and Advanced levels. The descriptions for Career II and Advanced level teachers were simply developed in preparation for possible funding.

Team-Based Variable Pay. One component of Senate File 476 was team-based variable pay (TBVP) (Iowa Department of Education, n.d.), which sought to create a collaborative learning environment rewarding teachers and administrators for achieving a common goal. This part of the SATQ program intended to allocate cash awards for teachers and others employed in schools whose pupils showed improvement on assessments. A pilot program was established to give Iowa school districts with one or more participating attendance centers the opportunity to explore and demonstrate successful methods to implement TBVP. Pilots were to be contained within a year and could be made up of a school building or even a grade level, although most participants were at the school building level. The Iowa Department of Education released a request for proposals that explained the criteria for involvement and how to apply. Required minimum criteria included the following:

- **Assessment System.** At least one valid and reliable standardized assessment measure for at least reading and mathematics in order to provide a pre- and post-assessment of student progress each year.
- **Attendance Center Annual Improvement Goals.** Academic goals that indicate the expected gain in performance in the areas of reading and mathematics and may include science.
- **Alignment of Professional Development.** An indication of the professional development to be provided for teachers and how the professional development will improve student achievement.
- **Local Board Approval.** Approval of the method for the provision of financial rewards and goals, assessment measures, and expected annual gain.

Within the above criteria, each participating district created its own design for a team-based pay plan linked to the district's comprehensive school improvement plan. The intent was that the application plans were to be locally driven. In other words, it was at the local level where decisions were made about the following:

- What measures (for student performance) would be used?
- Who would participate?
- What would be the student achievement goals?
- What indicators would determine progress?
- Who would benefit and by how much if the goals were met?

The program took place during three different academic years: 2001–02, 2003–04, and 2004–05. Table 2 provides general information about the three years of TBVP.

Table 2. Details of the Team-Based Variable Pay Program

Academic Year	Number of Schools for Pilot	Number of Schools Earning Awards	Range of Reward Earned	Assessments Used for Student Achievement Goals
2001–02	18	9	\$8,400 to \$44,400	Primarily ITBS or curriculum-based measures
2003–04	10	7	\$9,600 to \$112,900	Primarily ITBS or curriculum-based measures
2004–05	9	2	\$23,700 to \$32,400	Primarily ITBS or curriculum-based measures

Source: Iowa Department of Education (2002, 2004, 2005)

After the 2004–05 academic year, TBVP virtually disappeared. Summary reports (Iowa Department of Education, 2002, 2004, 2005) from each of the pilot years are available, but results of the program were mixed. Although teachers seemed to enjoy setting goals and working toward those goals, many were concerned about the measure of their performance being one standardized test taken by students.

For both the 1987 and the 2001 attempts at paying teachers for their performance, districts were to submit plans that addressed broad state criteria. The 1987 Phase III effort allowed for teachers to be paid for their behavior (as opposed to their performance, per say), and most district plans reflected this emphasis. While the 2001 SATQ effort was a bold move to tie pay to performance, it was solely a team-based effort and rewards were in addition to teachers' normal salary. Furthermore, both efforts fell short primarily because of a lack of state funding.

The draft recommendations from Learning Point Associates attempt to reflect a design that ties teacher performance in a more solid, fair way with learner performance. We also suggest a mixed-model approach so that student performance is not the exclusive indicator.

Section 2

Measuring Performance: Standards, Measurement, and Methods

To ensure their future success, students need much more than basic skills. Farmers now use global positioning systems and satellite imaging to decide the portions of their fields to cultivate. Elections are won by micro-analysis of local demographics and carefully focused Web campaigns. Firms gain competitive advantage by analyzing product movement hourly. Suppliers use automated sales transactions systems to acquire detailed data on consumer buying habits. The insurance industry today is far more than actuaries and calculators in a back room with sales agents out front.

A century ago, mechanics and engineers, factory managers and factory hands produced great planes and small cars. The primary steps of production and the core disciplines that managed the production process could be taught in classrooms, supported by the experience of schooling, and supplemented by on-the-job learning. Today, however, most industries are highly automated. Manufacturing that requires unskilled human labor moves to locales where labor is less expensive than in the United States. Today and tomorrow in Iowa, recognizing opportunity, assembling partners and teams, leveraging capital, conducting constant analysis to support continuous improvement, and knowing what is ethical—these are among the skills that matter, and do so in environments of ever faster communications, wider webs of relationships, and increasingly complex technologies.

The future of Iowa depends on the success of its young people. Iowa's youth of today and tomorrow will need to be able to think creatively in this constantly changing world. The web of interconnections among people will grow and with it interconnections among knowledge and opportunity. Iowa's youth of today and tomorrow must be equipped to be proficient in this new world.

Making Iowa's students successful in the future will require different ways of teaching. "Proficiency" in basic skills will not suffice: To have high impact on preparing students to be successful in their lives after high school, seven of 10 Iowa voters say teachers must teach critical thinking and problem-solving skills, and eight of 10 say students need to learn communication and information technology skills (Selzer & Company, 2006).

Standards

A recent report titled *Addressing Iowa's Greatest Imperative* (Institute for Tomorrow's Workforce, 2006) makes the case that Iowa's students must acquire 21st century skills, similar to those enumerated by the Partnership for 21st Century Skills and other organizations. The report recommends that Iowa schools emphasize the following:

- All core academic subjects, well beyond basic levels.
- Lifelong learning, particularly for information and communication skills, thinking and problem-solving skills, and interpersonal and self-direction skills.

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- Use of modern technology in learning to access, manage, integrate and evaluate information; construct new knowledge; and communicate with others in order to participate effectively in society.
- Up-to-date, real-world examples, applications, and experiences in teaching and learning inside and outside school to foster student engagement.
- Global awareness; financial, economic, and business literacy; and civic literacy.

To this list of knowledge and skills, many educators would add certain dispositions that are valuable for students to possess as they move on to adulthood. These dispositions typically include resilience and courage in the face of stress, a sense of craft and pride in work, commitment to justice, and caring in community life.

This is not a short list. Iowa’s schools already are tasked to do much. If this list is treated as a specification simply to add more to the curriculum, it is likely to harm teaching and learning—not add value. Rather, we suggest that the contents of this list should be incorporated into a single coherent curriculum.

Iowa has begun an effort to define coherent curricula. While the document titled *Grade-Level Indicators Corresponding to the Iowa Tests for Grades 3–12* (Iowa Department of Education, 2006) is a good start, the descriptors provide no clear clues to the students about how much they should be able to do, nor to the teacher about what to teach or how to teach it, nor to the system about how to distinguish 11th-grade accomplishment from fourth-grade accomplishment. Furthermore, it is not sufficient to lay out a list of proficiency-level descriptions differentiable only by the use of adverbs like “never,” “seldom,” “usually,” or “always.”

Iowa teachers know and apply the ITBS/ITED grade-level indicators. For reading, nine indicators are specified for Grade 4 and 10 indicators for Grade 11. Table 3 (on page 10) indicates a side-by-side comparison that points out the similarity in the content covered.

Again, it is difficult to see much substantive difference between the two columns despite a span of seven grades, where one would expect to see the steady growth in accomplishment by students as they progress through their school careers.

This is not to say that Iowa’s teachers do not move their students to mastery of increasingly difficult portions of the disciplinary curricula; they do. Test results bear them out. It is to say that in their present form, these descriptors provide little guidance.

Still, even the best curriculum often limits learning by focusing too much on a single content area and, therefore, omitting opportunities to foster conceptual connections. To break down barriers to learning, students should receive more opportunity for extensive engagement, application, and feedback within and across subject areas. Such opportunity supports and reinforces the development of subject knowledge while simultaneously challenging students to reason, solve problems, and make decisions.

Table 3. Comparison of ITBS/ITED Reading Indicators for Grade 4 and Grade 11

Grade 4	Grade 11
Understand stated information.	Understand stated information.
Determine the meaning of new words from their context.	Determine the literal meaning of specific words.
Draw conclusions, make inferences, and deduce meaning.	Draw conclusions and make inferences and generalizations.
Infer traits, feelings, and motives of characters.	Infer traits, feelings, and motives of characters or individuals.
Interpret information in new contexts.	
	Make predictions based on stated information.
Interpret nonliteral language.	Interpret nonliteral language used in a text.
Determine the main idea of a text.	Determine the main idea, topic, or theme.
Identify the author’s views or purpose.	Identify the author’s views or purposes.
Analyze the style or structure of a text.	Recognize aspects of a passage’s style and structure and recognize literary techniques.
	Distinguish among facts, opinions, and assumptions.

Measurement

The first standardized tests taken by most Iowa students occur in early elementary school, typically providing results for reading, vocabulary, and possibly arithmetic. As students are exposed to a wider variety of courses and opportunities as they proceed through school, additional subjects may be added to the testing regimen—science, writing, history, civics, algebra, geometry, physics, driver’s education. But as students in high school prepare to decide their futures, the standardized tests they take—whether for college entrance (ACT or SAT) or military (ASVAB)—provide results principally for verbal and quantitative reasoning skills. The measures that appear to matter at age 17 appear again much the same as those that mattered at age 10.

The Institute for Tomorrow’s Workforce has recommended sophisticated yet affordable and sustainable assessments to measure this content and these skills, assessments that capitalize on new information technologies. However, before setting out to design a system to measure student performance—particularly one expected to contribute to the measurement of teacher performance—it is important to be aware of the fidelity, or lack of it, among what should be taught, what actually is taught, what is tested, and what is learned.

The measurement system must describe how much a student knows and how much he or she learned. This information is critical because Iowans need to know that their students know enough and that their students are growing at a pace that will assist them to meet their educational goals on time. On the other hand, Iowa must accept that a measurement system cannot gauge all that a student learns or all that a teacher and student produce together. A valid and reliable measurement system will report definitively on several core outcomes driven by test items that tap the much broader spectrum of skills and content actually taught.

Methods

Iowa's AEAs and school districts continue to invest in robust data systems to collect, store, and link student assessment and demographic data. The ability to track and manipulate student assessment data has never been greater. Still, data tend to focus on the past. As Hoxby (2005, p. 51) indicates, we need to “measure progress by forecasting how well each school is moving toward the ... goal.” The simplest way to determine whether growth in student learning is *enough* is to extend the trajectory of each student's growth forward in time and see if it will exceed the target at that future time. If the rate gets each student to the target, a school looks to be successful. If not, steps are needed to improve instructional practice. Placing the emphasis on prediction is critical so that schools know whether they will make their improvement targets and can plan appropriate interventions if they are off-target.

Analysis and prediction based on once-a-year-data is necessarily a slow process. Teachers and schools collect data much more frequently, yet these data tend to live apart from the annual, more formal, high-stakes state and district accountability data. A major improvement would be to bring these two types of data together. If frequent data can predictably explain annual data, prediction based on frequent data can be used to drive changes in instructional process within the school year, thereby accelerating improvement.

Attempts to understand performance using the results of multiple types of assessments must respect that complexity and even take advantage of it. Fortunately, advancements in assessment, data systems, statistics, analytics, and the sheer processing power of computers allows for the creation of a performance-based system that is able to incorporate and model the complexity of schooling, including the clustered relationships among teachers and students and the integration of learning from subject to subject. Iowa has the opportunity to investigate the application of these new technologies for the purpose of developing a more effective performance-based system for teachers and students.

Section 3

Teacher Incentive Pay Plans

In its quest to render schooling better, Iowa—like most of the nation—faces two sizeable challenges. One is how to elevate student performance. The other is how to engage professional educators fully in the previously mentioned quest and how fairly to reward them for their added efforts.

Linking Teacher Pay to Student Performance

Elevating Student Performance

Elevating student performance has been a national goal since the issuance of the report *A Nation at Risk* (National Commission on Excellence in Education, 1983). In the intervening quarter century, states have become clearer regarding learning expectations. Many states have initiated comprehensive testing systems aimed at measuring progress toward learning goals. Often textbooks, teacher training, educator certification, and professional development have been aligned with learning goals and testing. Federal law, through the No Child Left Behind Act, has reinforced the message. However, most of the low-hanging policy fruit has now been harvested. Whereas the context of schooling has been altered, little regarding formal instruction has changed. Many—and maybe most—classrooms operate today as they did in 1983. Education researchers have been able to provide little by way of empirically validated pedagogical practices that ensure higher student achievement. Even when a few best practices have emerged from research, systems to change the instructional skills of teachers have been underfunded. Hence, the challenge now is to render actual instruction more effective. This goal can be accomplished most realistically by consciously and actively enlisting the teacher workforce in the search for solutions.

Aligning Educator Incentives With the Quest for Elevated Achievement

Presently, schooling in Iowa and elsewhere suffers from a set of dysfunctional reward systems. On one hand, promotion to higher rank and status almost inevitably removes one from the classroom. The most able instructors have few means by which to seek higher regard except to become administrators. Second, activities for which present-day pay practices compensate teachers—years of experience, state certification and added college courses beyond a bachelor’s degree—have little or no empirically supported relationship to gains in student achievement. Thus, agreeing upon and operationalizing the means by which educator promotion and compensation can be fairly linked to elevated student performance is a major challenge. This challenge presently operates under the policy banner of “pay for performance.”

National Efforts to Link Achievement to Educator Performance

Pay for performance does not have a precise meaning in education. However, as a concept, it has two major facets. One is paying teachers added amounts to acquire knowledge and skills that, at least logically, have a presumed link to their ability to instruct students. The other pay-for-

performance facet is linking educator remuneration more directly to the academic achievement, however measured, of the students for whom they are instructionally or administratively responsible. According to Public Agenda's 2003 *Stand by Me* poll (Farkas, Johnson, & Duffett, 2003), when asked if districts should be able to use criteria other than putting more time in the district or going back to school for graduate work as a means to financially rewarding teachers, 41 percent of respondents stated that districts should be able to use other criteria. Interestingly, 55 percent of those respondents were new teachers and only 33 percent of the respondents were veteran teachers.

Learning From the Past

Teacher pay for performance is not new in the nation, nor in Iowa. Historically, there have been initiatives put forward by which teacher pay would be linked to measures of teacher proficiency or measures of student performance. The last major round of activity in this sphere was in the 1970s and '80s. At the time, the idea paraded under the label "merit pay." That movement spread dramatically across the nation's policy landscape and then rapidly faded into operational oblivion. In addition to resistance by professional educators, the movement failed because it paid little attention to matters of accurate and fair measurement of teacher performance or student achievement, was insufficiently linked to analytic efforts to appraise its strengths and weaknesses and make midcourse corrections, and offered financial incentives of a magnitude insufficient to motivate added teacher enthusiasm or performance change.

Present-Day Activities

Pay for performance is once again a popular policy topic. Fifteen states have recently adopted a form of financial compensation for added levels of student achievement or teacher proficiency. These include states with large populations (such as Texas and Florida) as well as states with small populations (such as Alaska). Congress has authorized and the U.S. Department of Education has recently issued \$42 million in Teacher Incentive Fund (TIF) grants to 16 states and local districts to implement, measure, and improve teacher pay-for-performance plans. Some states rely on competitive proposals from districts and schools and award funding based upon the merit of submitted plans. Other states have mandated a statewide approach. Even individual districts (Houston, Texas) have implemented their own plans for teachers or administrators (Austin, Texas). To date, no one model has emerged as dominate.

The Current State of Teacher Pay for Performance

The weight of the research evidence regarding pay-for-performance strategies is favorable, both from the private sector and from the education setting. However, the number of empirically based research studies in education, even if positive in outcome, is slender. Significant details remain unknown. What follows is only illustrative, not exhaustive.

Private-Sector Lessons

The stereotypical understanding of private sector pay-for-performance plans envisions the sale, manufacture, and distribution of products or services. The more items or services are produced

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and sold, the higher the commission or bonus of those involved. There certainly exist such production-specific, private-sector, pay-for-performance plans; those familiar with them know of the rather handsome rewards for personnel who are diligent and successful plant managers and sales persons.

In addition, performance incentive plans in the private and not-for-profit sectors involve opportunities for individual promotion. Promotion usually carries higher material rewards and, not infrequently, higher responsibility. Promotion can be based upon both specific outcome goals and less measurable superior or peer judgments. Of course, there exist private sector plans by which failure to achieve promotion means that a passed-over individual leaves the organization. Former General Electric CEO Jack Welch was highly controversial for implementing such plans. However, the promotion system in many universities and the highest ranks of the American military also involves up or out. The issue in U.S. school districts is that promotion conventionally means both up and out (of the classroom).

Education-Sector Unknowns

Immediate application of teacher pay for performance provokes complicated issues such as the following. (Before listing these challenges, however, we point out that so far there has been only the most limited effort to overcome these complexities. Many of them may well lend themselves to technical solution, once the policy community so directs.)

- Data infrastructure challenges, such as linking individual student performance measures to their specific classroom teacher(s).
- Stability of individual student and classroom test scores from time to time.
- Inclusion of subjects not conventionally covered with objective measurement (e.g., visual and performing arts).
 - Magnitude of financial reward needed to be perceived as an incentive for educators.
- Tradeoffs of team (collective) rewards relative to individual rewards.

Emerging Pay-for-Performance Components

Performance rewards can be aimed at individuals (teachers, administrators, and staff, or all of these individuals), or collectives (teacher teams or schools). Some plans are exclusively aimed at one or the other of these targets. Some plans are aimed at both. The following strategies have emerged as possible components of a pay-for-performance plan. These strategies are seldom mutually exclusive. Their components can be combined. Each has attractive as well as disadvantageous features.

- Performance-based career ladders to enable educators to gain professional promotion but not have to forgo being a teacher.
- Rewards or promotion based upon peer or superior reviews and judgments of individual classroom-teacher accomplishments.
- Individual teacher gains in instructionally related knowledge and skills.

- Team- or school-based incentive systems framed around gains in student achievement.
- Individual teacher awards based upon gains in student academic achievement (discussed in Section 2 of this report).

Iowa Context and Conditions

This report's pay-for-performance options are shaped by several contextual conditions:

- **Educator Perceptions of Policy Instability.** As described in the foregoing section, Iowa's educators are not naive regarding pay for performance. In 1987 and again in 2001, following legislative actions, the Iowa Department of Education undertook development and implementation of professional pay-for-performance initiatives. School districts cooperated. However, full implementation of these policy prescriptions was dependent upon added state appropriations. Downturns in the nation's and Iowa's economy beginning in FY 2002 short-circuited the state financial commitment to the most recent pay-for-performance policy initiative, and the program has subsequently languished short of intentions.
- **Uncertainty Regarding Technical Features.** Whereas empirical evidence, from both private sector and educational settings, is favorable to pay for performance, there remain large knowledge gaps. Among these are the relative strength of pay for performance in further motivating teachers, its effects on inducing even more qualified individuals into the teacher workforce, the optimum level of financial incentives, the relative strength of individual versus collective rewards, and the infrastructure and data system needed to buttress a pay-for-performance system.

Three consequences flow from these prior conditions:

- Too little is now known regarding pay for performance to specify and mandate statewide adoption of a single pay-for-performance model or system, particularly one based exclusively on student achievement measures. A mixed or hybrid model presently appears most appropriate.
- Whatever the model adopted or tested, there will be a need for several years, at least, of systematically assessing its consequences and undertaking midcourse corrections.
- State government should pledge itself to sustained funding for the pay-for-performance project or experiment. Such a pledge would help to overcome fears that another fiscal default will engender sufficient cynicism to jeopardize, perhaps unfairly jeopardize, the successful implementation of the idea for some time to come into the future.

Design Principles

This report's three sets of options are intended to achieve the following policy objectives:

- Render K–12 teaching additionally attractive as a profession.
- Reward current public-school teachers fully and more fairly for their contributions to student learning. This objective is imperative, as focus groups showed that, by far,

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participants' highest priority for a pay-for-performance system was that it would acknowledge the challenges of serving all students.

- Capitalize on current knowledge, best practices, and Iowa experience in the pay-for-performance realm that may result in greater operational knowledge and contribute to fine-tuning a pay-for-performance system in the future.
- Ensure greater equality of educational opportunity by providing market incentives to identify able teachers for hard-to-fill positions and hard-to-serve schools and classes.
- Be sufficiently transparent to enable both education professionals and the general public to better understand the bases upon which teacher pay is constructed. Again, one principle of a pay-for-performance system that was important to focus-group participants is that goals, measures, and outcomes are clear to everyone involved.

Section 4

Draft Recommendations

Following are draft recommendations for student performance and teacher pay-for-performance suggested by Learning Point Associates and its partners for Iowa’s consideration in the design process. These recommendations should be seen not as separate steps but as an integrated set of steps that work together to create opportunities for students and teachers to do better.

Student Performance Recommendations for Iowa

Before setting out to design a system to measure learner performance—particularly one expected to contribute to the assessment of teacher performance and, potentially, the allocation of salary bonuses—it is important to be strongly aware of what is being measured and what are the limitations of measurement.

Guidance about what works under what conditions should be provided to local schools. Local schools should select the most promising options, in their estimation, and test them. Schools and staff should be supported so that the pilot tests result in reliable, relevant, and meaningful data. Furthermore, schools should be empowered to manipulate these data to provide answers to their own questions about what works and what does not.

However, even reliable data require interpretation. Ultimately, the questions we ask constrain the answers we can derive. School staff should not need to also be database programmers, data analysts, or psychometricians in order to learn from the data about their own processes, inputs, and outcomes. A well-designed assessment system supported by a carefully conceived data system should result in school leaders who can describe the relationships among inputs and outputs that produce student learning.

In addition, any new system that supports and measures student performance should consider the following design principles:

- **Respect for Education’s Complexity.** Students do not grow linearly but seemingly by fits-and-starts, often unpredictably. Reading skills influence science learning; mathematical aptitude affects growth in physics. Iowa’s systems for measuring student performance and allocating any teacher pay-for-performance bonuses must respect this complexity and even take advantage of it.
- **Local Relevance.** Identifying and confirming what works in a particular school or district comes first. Some of the following teacher-performance recommendations permit the construction of a local growth model focusing on the value that instruction adds, and permitting the assignment of responsibility for that growth simultaneously to individual teachers and groups of teachers, both current and prior.
- **Statewide Utility.** Local value-added results can be synthesized at the state level using meta-analytic procedures across standardized effect sizes to ensure the consistent application of measures of student learning and rewards for teacher and school performance.

Recommendation 1: Develop and adopt clear standards.

Iowa should consider implementing a statewide process for the development of consistent, comprehensive, challenging, progressive *content standards* for instructional content (what teachers should teach), instructional practice (what teachers do teach and how they teach it), and instructional outcomes. There also should be *performance standards* (clear statements describing what students at various performance levels are able to do). On each assessment instrument, cut-points should clearly demarcate the boundaries of the individual performance levels. Work also is necessary to ensure rapid and broad understanding of the standards.

Variations among Iowa's communities and schools exist and will continue to exist. However, the educational opportunities provided to a student in Bettendorf must be no less than those provided a student in Orange City. Clear statewide content standards and performance standards, for instructional content and for instructional practice, will help ensure those opportunities are everywhere available.

A place to begin is the clear specification of the purposes and targets of teaching. Iowa's current standards, descriptors, and model curricula provide insufficient guidance for students and teachers, and insufficient specificity for assessment. Students cannot gauge where they stand with respect to the curriculum; teachers cannot gauge just what should be taught or how successful they are; school leaders are not well supported to devise consistent, progressive, articulated curricula; and assessments are difficult to construct because the details of instructional sequence is poorly defined. Also professional development may be handicapped by not having a common platform to serve multiple small districts that now may have wide variance in instructional approaches.

Content Standards. Content standards should make clear what is to be taught and in what sequence. They should emphasize major conceptual topics. They should trace the interconnections among concepts within and across disciplines. They should provide consistent and deepening opportunity for students to exercise their growing powers of reasoning, problem solving, and communication. They should challenge students to perform to high levels.

Performance Standards. Although content standards speak primarily to what students know, Iowa also is concerned about what its students are able to do. Performance standards are difficult to define because the skills are almost always applied in specific situations. Constructing and sampling a variety of situations is expensive. Iowa's instructional standards (what should be taught and how) must provide explicitly for the creation of opportunities for students to develop and practice what they are able to do. Particularly important in this regard is the opportunity to practice nonroutine applications of skills. It is through nonroutine problems and solutions that best opportunity is provided for development in growth in reasoning, problem solving, and decision-making skills. These skills are necessary for success in all aspects of life after school, whether in the university, on the job, in the military, or in civic life.

Iowa is working on these issues. A few years ago, Iowa was one of just two or three states with no formal academic standards in place. Now, Iowa has teacher career ladders, teaching standards, model core curricula, performance/proficiency descriptors, and grade-level indicators.

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Despite these advancements, there continues to be a lack of clarity about student outcomes and evidence of student progress in meeting these outcomes over time.

With changing economic and education environments, Iowa must adapt its system of local control so that the “what” of student learning can be determined more centrally as students must act out their future on a global stage rather than a local one. To be competitive in the 21st century, Iowa needs much stronger statewide descriptors, indicators, and even standards. Following are several examples on which Iowa could build:

- The American Association for the Advancement of Science (AAAS) Project 2061 builds conceptual strand maps that demonstrate the linkages among the core ideas and processes of scientific inquiry. These maps detail a coherent curriculum that progresses by conceptual strand and student grade level. The maps quickly help students see what they know, what is connected to what they know, and what they should know but may not.
- The National Council of Teachers of Mathematics announced its *Curriculum Focal Points for Prekindergarten Through Grade 8 Mathematics* in September 2006. This program articulates a structure for a developmental sequence of teaching mathematics across the grades, while at the same time focusing each grade on a few core concepts. Repetitive instruction as a child moves from grade to grade is eliminated. Again, as with the AAAS Project 2061 material, the document lays out a clear trail for learning and is highly suggestive of how to teach. These recommendations have an urgency that requires a state-level curriculum response to support local districts in making these changes. They should not have to reinvent new mathematics curriculum district-by-district.

These challenges to the current education system cannot be repaired in short order. We recommend that Iowa commit promptly to a thorough study of the curriculum in place in the state and to the best thinking about curriculum nationally and internationally. Iowa also should listen carefully to what is being said by business and higher education about the place of core skills (reasoning, problem solving, decision making) within and across academic disciplines.

A first step should be to reach agreement on the broad scope of the core content, skills, and dispositions that schooling should target. Next, some preliminary sense of articulation across the grade span should be derived. Once these are in place, Iowa should plan a thorough “mapping” of curriculum content, using the work of AAAS Project 2061, for instance, as a model for the level of detail needed in this work. As decisions about the details of these maps stabilize, connections need to be made to assessment, including possible revisions to the ITBS and ITED.

Recommendation 2: Commit to firm, fair, and full measurement of student and teacher performance.

This recommendation encompasses measurement of the following: core academics, skills, teaching practices, and specific high-school achievement.

Core Academics. Annually test all students in Grades 3 through 11 in reading, mathematics, and science, using the ITBS/ITED. Testing should take place late in the school year. Individual

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student test results should be linkable to all teachers in whose classes the student participated during the school year.

Reading, mathematics, and science will continue to be the core academic subjects for most students during their K–12 career. The ITBS and ITED capture achievement in these central subjects well, and should continue to be administered to all students in Grades 3 through 11 annually in late spring. Also, to better document student learning trajectories, we recommend testing in Grades 9 and 10, although that is not current practice in Iowa.

The data system that houses student test scores should enable individual teacher access to student results in all the classes in which each student participated and should identify which teacher taught each class. Teacher substitutions and shared teaching loads also should be captured by the data system. In addition, teachers for subjects other than reading, mathematics, and science should be included. Although subject-area teachers likely are most responsible for subject-area learning, it is also true that there is much interconnection and crossover. Both science scores and mathematics scores, for instance, are influenced by reading scores. Over time, schools need to understand how each teacher and each subject contributes to student learning.

It is important to realize that this data system need not be constructed at the state level. These could be school or district systems. What is critical, however, is that teacher and student time together be linked, most easily through scheduling software, so that it becomes possible to analyze student achievement in terms of relative teacher contributions, not simply subject assignment.

Although performance levels often are used to report student learning, we strongly recommend that a continuous scale, such as the Iowa Testing Programs' scale scores, once again become the primary reporting and analysis score. The continuous score carries significantly more information and less biased information than the performance levels. To truly understand the productive processes of schools or the history of each student's progress, the most information-rich scores should be used. This recommendation can be quickly implemented at little cost. One reason for early implementation of this particular recommendation is to provide a more sound psychometric and statistical basis for the evaluation of the pay-for-performance trials, to the extent those trials choose to incorporate ITBS and ITED data.

Skills. Every student should be assessed three times during his or her K–12 career on select critical skills (e.g., problem solving, decision making, creativity).

We recommend this assessment be constructed using a matrix sampling process whereby each student takes only a few items. This approach, done well, will generate robust school-level results at reduced cost and reduced testing time. To further reduce cost and effort, we recommend a computer-delivered test administration. We suggest that only students ages 11, 14, and 17 be tested.

We recommend a focus on school rather than individual results because, as introduced above, the acquisition of skills is greatly influenced by the opportunity to develop and practice skills. In addition, because these critical skills are present in almost all school subjects, their mastery is

influenced by contributions from across the curriculum. Since a primary goal of this report is to influence improvements in instructional delivery patterns and the quality of teaching and learning, the recommended unit of change as a result of collecting better data on students' skill mastery is the teaching faculty.

A model for computer-adapted performance testing of 21st century skills currently exists at the collegiate level. One example is the Collegiate Learning Assessment (see Council for Aid to Education, n.d.). We recommend that Iowa study this test closely and embark on a project to use similar technologies to adapt appropriately for younger students. Another model can be found in the Programme for International Student Assessment (PISA) assessment for problem solving. This instrument targets 15-year-olds and defines problem solving as the capacity “to use cognitive processes to confront and resolve real, cross-disciplinary situations where the solution path is not immediately obvious and where the literacy domains or curricular areas that might be applicable are not within a single domain of mathematics, science or reading” (Organisation for Economic Co-operation and Development, 2004, p. 2). Again, considerable adaptation is likely to be necessary for Iowa.

This recommendation is not intended for immediate implementation. Significant work on articulating content and aligning to assessment is required. As such, valid and reliable instruments will likely require two to three years of development to be ready for all three age groups. However, beginning this work now will give Iowa a leading position in extending the measurement of K–12 school outcomes beyond core academics and make it substantively easier to connect college and university learning to K–12 learning.

Teaching Practice. Every teacher's coverage of standards, expectations for students, and forms of pedagogical practice should be tracked, by means of work-sampling methodology.

Better measurement of student achievement is useful in its own right. However, if schools and teachers are to improve how they work, they will need to connect student outcomes to programs and to instruction. We therefore recommend that Iowa design a statewide process to assist individual schools with making those connections. To our knowledge, no other state has yet begun to explicitly make that connection, but there are existing products that Iowa can build on to capture whether classroom instruction is actually aligned to what is taught.

For example, the *Surveys of Enacted Curriculum* can be used as an annual retrospective survey of teachers. The data from these surveys are constructed into maps of instructional content by plotting the intersection of the topics taught by the teachers' expectations for students' learning. Expectations range from basic memory and information acquisition to application of the information to creating new uses under non-routine circumstances. Instruction that is more aligned to standards has been shown to produce stronger tested performance (Gamoran, Porter, Smithson, & White, 1997). The surveys have been converted into a computerized, online process and would be available to Iowa through its current participation with the Council of Chief State School Officers. However, because the data in the surveys are self-reported by teachers, additional measures of teaching practice would need to be included with this approach.

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Another example may be found in the performance rubrics constructed by John Schacter, Ph.D., of the Milken Family Foundation. These rubrics measure teacher practice against standards and expectations. The process requires several rounds of classroom observations and is therefore more cumbersome and expensive to implement. Robert Croninger, Ph.D., at the University of Maryland has built a curriculum coverage tool based on using a personal digital assistant (PDA). Teachers enter their instructional coverage into a PDA, usually taking only a minute or two each day, and the data are then uploaded automatically to a server.

These examples are cited not to recommend them but to show the feasibility of recording far more information about what happens between teachers and students within classrooms than is typical. Given such information, the prospect of more informative analysis of the relationship between growth in student achievement and instructional choices becomes realistic.

This recommendation is not one to be adopted broadly immediately. There are numerous details of implementation, not to mention validity and reliability, to work through. Our recommendation is intended to begin the process. One clear place to begin is within at least a few of the 10 pay-for-performance trials already legislated.

Specific High-School Achievement. Establish end-of-course tests for all core curriculum high-school courses; require all 11th-grade students to take the ACT; keep high school completion rates above 95 percent for each Iowa high school.

In high school, students diversify in terms of the courses they take and the paths they plan to pursue afterwards. Some students choose not to finish 12th grade. The diversification adds complexity to measuring educational outcomes. This recommendation intends to ensure quality in all high schools throughout Iowa and encourages movement into post-high-school academic, vocational, or technical training.

The primary goals of this recommendation are to ensure that the quality of the required core curriculum in Iowa is consistent across the state, that all Iowa's students have equal opportunity to enroll in and complete those courses, and that those courses set high standards for student achievement.

End-of-course testing, accompanied by detailed syllabi of course contents, will assist in maintaining consistent quality and challenge. Requiring the ACT for all 11th graders will provide strong feedback to both the student and the community about the preparedness of Iowa's students for the future. Over time, these additional data points, when connected to the accomplishments of students in elementary and middle school, will build a rich new source for studying the effectiveness of the system as a whole as well as the utility of program and course choices within districts and high schools.

The ACT recommendation can be implemented quickly. A number of states already have done so. End-of-course tests and course syllabi will take somewhat longer, and should parallel the standards work of Recommendation 1 for student performance. Raising the high school completion rate higher than 95 percent and keeping it there will take significant effort, involving

a number of initiatives and actors. Counselors, teachers, parents, local communities, and business will need to become involved.

Recommendation 3: Motivate students to want more and demand better from their education.

Teachers and students need constant reminders of where they are going as the world around them changes. Allowing students and teachers to see more details earlier of the content of the next assessment, particularly those that control entry points to further educational opportunities, can assist in building the necessary knowledge base among students of how the world is changing and what it is requiring.

A more connected curriculum, enabling students to see more clearly what is to come, should help foster student engagement. Student assessments in particular need a stronger dose of realism. Real-world word problems that fail to mimic what the problems of the real world are or how they are solved are not helpful, and students quickly realize this. Forging a stronger connection to industry, business, and even the military during the development of content and performance standards and assessments—particularly high-stakes ones—has multiple benefits to offer.

This recommendation has both short-term and long-term aspects. A committee or a commission is easy to create and not expensive. However, creating an infrastructure over time to ensure continuous input from business and industry to keep content abreast of what they use and the skills they need is a more cumbersome task.

Iowa's education system is well respected, both within Iowa and outside. There is will in the state to improve it, to make it a centerpiece of economic and social growth. There is strong current expert consensus about the educational outcomes that matter, about instructional practices that are truly powerful, about strong measurement of valued outcomes, and about the requirements for data and analytical systems that analyze and report results fairly and meaningfully. An impartial working group should lead development of standards and ensure that standards remain in tune with the needs of the state and the nation. This body's membership should include representation from K–12, higher education, parents, and the business community.

Teacher Pay-for-Performance Recommendations for Iowa

Iowa can significantly improve the effectiveness of its teacher pay practices by replacing the single-salary schedule with two separate yet interrelated reforms: a career ladder that permits teachers to advance professionally and monetarily while remaining in the classroom and a pay-for-performance plan that permits teachers to earn salary increments based on their own and their students' performance. (The career ladder is illustrated in Table 4, and the pay-for-performance plan is illustrated in the Table 5.)

Together, these reforms should stimulate added interest in teaching as a professional career by:

- Substantially elevating entry-level classroom teacher salaries.

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- Creating a dynamic career ladder that permits individual classroom teachers to be professionally promoted yet remain as instructors.
- Compressing the salary schedule so that able individuals can make accelerated progress toward the highest teacher pay levels.
- Offering individual teachers an extended option of annual, rather than academic year, pay based on a 12-month rather than a 10-month work year.
- Offering individual classroom teachers income supplements for student performance gains and added professional service.

These reforms likely stimulate improved student performance by:

- Linking a portion of teacher pay to enhanced classroom instructional skills and enhanced student achievement.
- Offering inducements for able teachers to instruct in hard-to-fill positions or hard-to-serve school settings.
- Providing an entire school community with bonuses based on increments of student achievement gain

Recommendation 1: Design financial inducements for local district career ladders.

State government should share the cost and provide technical assistance to local school districts voluntarily making a transition from existing single salary schedule arrangements to a career ladder plan, such as illustrated in Table 4.

Table 4. Suggested Career Ladder for Iowa Educators

Teacher Status	Employment Experience to Become Eligible for Promotion	Academic Year Salary	Annualized Salary (10 % increase)	Promotion Qualifications	Means for Receiving Added Pay
Apprentice (<i>Beginning</i>) ¹	3 Years	\$35,000	\$38,500	Deemed eligible by Iowa District to be employed (No state certification requirements)	Up or out
Assistant (<i>Career I</i>)	2–4 Years	\$45,000	\$49,500	Consistent fulfillment of performance Steps I and II ²	Performance Steps III and IV
Associate (<i>Career II</i>)	2–4 Years	\$55,000	\$60,500	Consistent fulfillment of performance Steps I and II	Performance Steps III and IV
Master (<i>Advanced</i>)	Renewable	\$65,000	\$72,500	10% of Iowa teachers	Performance Steps III and IV

¹ Italicized labels are consistent with existing Iowa career path nomenclature.

² See next grid for explanations of Steps I, II, III, and IV.

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The purpose of a career ladder is multifold. First, it aims to induce larger numbers of able individuals into teaching by offering a higher entry-level salary and the option of an annualized salary by compressing the time needed to advance to higher salary levels and (when combined with a pay-for-performance plan) by offering an opportunity to earn even more through individual and collective effort. Second, the career ladder aims to justify teacher pay on a more rationally defensible basis than the current single-salary schedule system which overrewards experience, advanced college credits, and certificates.

Recommendation 2: Design pilots to elevate teacher pay through performance.

The state should allocate authorized funding to the solicitation of competitive proposals from school districts for 10 pilot projects characterized by the following listed in Table 5.

Table 5. Suggested Pay-for-Performance Plan for Iowa Educators

Award Strategy	Target	Additional Pay Range	Means for Determining Eligibility	Form of Pay
I. Student value-added reward	Individual	3% to 5 %	<ul style="list-style-type: none"> • Student test scores 	Annual bonus Base salary addition or acceleration
II. Teacher appraisal-based reward	Individual	3% to 5%	<ul style="list-style-type: none"> • Peer or peer and supervisor appraisals of teacher performance and (possibly) knowledge and skills • Acquisition of attributes specified as abetting district or school pursuit of higher student achievement 	Bonus Base salary addition or acceleration
III. Whole-school reward (Inclusion of classified employees optional)	Group	3% to 5 %	<ul style="list-style-type: none"> • Student test scores • Student attendance • Teacher attendance • Other? 	Annual bonus
IV. Hard-to-staff or hard-to-serve schools	Individual	5% to 10%	<ul style="list-style-type: none"> • Market factors applied to specified shortage definitions 	Annual Bonus

Recommendation 3. Design mechanisms for evaluating the effects of career ladder and pay-for-performance initiatives.

Arrangements will be needed continually and systematically to appraise the operational consequences and strengths and weaknesses of both the proposed career ladder system and the pay-for-performance system. This appraisal can be undertaken by a state agency. However, it also can be undertaken through a contract to a reputable program evaluation firm or agency.

Regardless of the specific pay-for-performance system that is piloted, each should be carefully followed with good data systems to ensure that midcourse corrections are possible.

Conclusion

This report has attempted to provide research-based evidence and important historical context about Iowa's past and present as the baseline for thinking about the future of education and adopting a course for change. The authors recognize that more detail on exactly how the draft recommendations should be implemented is a necessary next step, but this interim report will hopefully provide a conceptual place to begin the rich conversations necessary to move toward improving teacher performance and student outcomes.

Creating a 21st century framework for student learning is a complex undertaking and necessitates simultaneous conversations about how to best improve and align the many parts of the education system at one time. Taken together with the draft recommendations for improving the performance of the educational delivery system in Iowa (see *Creating a 21st Century Framework for Student Learning: A Bold Plan to Support Innovative Changes to Iowa's Educational Delivery Systems*, posted at the Institute for Tomorrow's Workforce website at <http://www.tomorrowworkforce.org>), we hope the design options for learner performance and teacher pay for performance presented here will be viewed as another step toward an education system that works for all Iowans.

Learning Point Associates welcomes feedback and input from all Iowans on the draft recommendations included in this report until December 8, 2006. Feedback can be submitted online at <http://www.learningpt.org/itw/feedback/>.

In addition, Learning Point Associates will present the draft recommendations to the Institute for Tomorrow's Workforce Board of Directors on November 15, 2006, and to the Teacher Compensation-Learner Performance Advisory Workgroup on December 1, 2006. The Institute for Tomorrow's Workforce and Learning Point Associates will be facilitating additional public input activities from mid-November through early-December 2006. These include presentations to the Urban Education Network, the Iowa School Boards Association, AEAs, and Iowa principals and teachers (by means of the Iowa Communications Network).

All feedback and comments gathered during the public input process will be incorporated as appropriate, and a final draft of the report will be submitted to the Institute for Tomorrow's Workforce on December 12, 2006.

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