Taking Promising High School Practices To Scale

Challenges For Oregon In Service Delivery And Governance

OREGON EDUCATION ROUNDTABLE

October 2008

Acknowledgments and Credits

This is the final white paper in a series about the vital importance of getting as many Oregonians as possible to and through a postsecondary education, whether a graduate, undergraduate, or two-year degree, or a certificate in a skilled occupation. This paper looks at best practices to improve the readiness of high school students for postsecondary schooling—and how Oregon can improve governance to support such best practices.

This collection of white papers was made possible by a generous grant to the Oregon Education Roundtable from the Lumina Foundation for Education and the ongoing support of the Oregon Community Foundation.

This paper was researched and written by John Svicarovich under the direction of Jill Kirk, Oregon Business Council vice president and manager of the Oregon Education Roundtable project. Officials, experts, and peer reviewers contributed their knowledge and insights to this work.

The Roundtable is grateful both to our donors and to those who volunteered their time to inform our research.

Taking Promising High School Practices To Scale

Challenges For Oregon In Service Delivery And Governance

OREGON EDUCATION ROUNDTABLE

Contents

Summary

Introduction 1

Service Delivery and Governance . . . 3

Three Best Practices in Oregon 7

Proficiency-Based Practice 9

Small Learning Communities 31

Concurrent Credit Programs 39

Policy Recommendations 47

Implications for Governance 51

Appendices 55

The significant problems we have cannot be solved
at the same level of thinking with which we created them.

Insanity: doing the same thing over and over again
and expecting different results.

—Albert Einstein

SUMMARY:

THE NEED AND THE MEANS FOR BETTER HIGH SCHOOL PERFORMANCE

Previous Roundtable white papers and two all-day meetings this past spring with some of Oregon's most influential educators confirm the prevailing view that too many Oregon students are left behind or delayed on the path to education attainment. This occurs at the very time more of them should be able to move faster and farther – for their own sake and for the sake of the Oregon economy.

Students encounter the worst bottleneck impeding attainment at the high school level, where a third of entering ninth graders don't achieve a diploma in four years. Among those who do, at least 40 percent are not prepared to succeed in postsecondary education.

Old model, old assumptions. The prevailing delivery model – instruction in particular – is out of date, the left over product of a time that didn't believe all students can, nor necessarily should, achieve to the highest levels. That model makes time the constant and learning the variable. It often puts the needs of schools and adults in them above the needs of students. It tolerates dropouts and failure. It is based on assumptions that not all students can learn and that public commitment to universal education ends at high school. It is based on nostalgic views of high schools as they once seemed to be, not as they need to be now.

Oregon and its young cannot afford that delivery model or those assumptions. The stakes are too high to let any student fail.

Promising new practices. In schools across the state, talented educators are breaking the old mold, employing new practices that are transforming student achievement. Taking any or all of them to larger scale can help Oregon achieve its ambitious objective to help more Oregonians attain more education than ever before. Our policies need to support such practices, and governance needs to change to accommodate those policies and practices.

Three practices that can transform high school education in Oregon are proficiency-based assessment and instruction, small learning communities, and concurrent credit programs. The challenge is how to take them to statewide scale.

Proficiency-based education. Proficiency-based practice has the greatest potential to realize the best outcomes at the least cost, and it completes Oregon's long journey to achieve a standards-based education system. Schools in Redmond, Scappoose, and Beaverton are showing the way. Others are starting to join them.

In a proficiency-based classroom, students start a course knowing exactly what proficiencies they need to master to demonstrate that they have acquired content knowledge and skills. They work at it at their own pace until they get it right. Teachers, often working in teams, use formative assessment at every step of the way to measure learning and to gauge and adjust instruction. When students master the required proficiencies, they are assessed and graded on that basis only. Inconsistent, arbitrary, and inflated grading across classrooms, schools, and districts is not a part of proficiency-based education. In a proficiency-based system, teachers flourish as much as students.

Oregon has laid a good policy foundation for proficiency-based education, but it needs to do more to encourage adoption of this practice statewide, to support professional learning communities, and to get its teacher education institutions, public and private, engaged with this practice and the schools.

Small learning communities. With numerous demonstration sites supported by northwest foundations and the federal government, small learning communities in Oregon high schools are proving to be a valuable tool for personalizing the learning experience, injecting rigor and relevance into instruction, putting caring adults closer to students, and building professional learning communities. Small learning communities should be employed more flexibly in the schools, and Oregon policy should welcome more kinds of small learning communities, from schools within schools to age-based academies to charter schools, magnet schools, and online communities.

Concurrent credit programs. Concurrent credit programs are helping thousands of Oregon high school students, typically juniors and seniors, get a head start on college by enrolling in courses that count simultaneously toward a high school diploma and college credit. Students typically take lower division transfer courses, career technical courses, or both, either on the high school campus or at the postsecondary school.

As good as these programs are in giving students a jump on college, on saving them money, and in boosting their achievement and persistence once in college, only a fourth of Oregon students are involved in them. Oregon is beginning to do more to support student involvement in these programs, and it should. In particular, it should increase promotion and recruitment. It should restore its Expanded Options program, which the Legislature created in 2005 to make concurrent credit more affordable for at-risk students but then weakened in 2007. It should address a growing shortage of high school teachers qualified to teach lower division college courses.

Implications for governance. To support and expand its most promising practices and to achieve its education attainment goals, Oregon needs to re-examine its fragmented system design and equally fragmented governance system with an eye to streamlining both. Well-meaning – and partially successful – efforts to work around this fragmentation have not been sufficiently successful.

The state should consider unifying its governance structure, building greater capacity and access for students, increasing student options, funding students rather than institutions, and making other fundamental changes in the way it locally governs, serves students, and purchases services. And it should be ready to deal with disruptive innovations that come with technology advances and other changes in the world.

INTRODUCTION

This paper addresses the need to improve education service delivery to Oregon high school students and to overhaul Oregon education governance to accommodate that improvement. In particular it concentrates on how the learning environment and instructional programs can be improved for high school students through practices that show great promise even though they now operate at modest scale. Taking these and other instructional improvements to statewide scale will require significant changes in governance at both state government and local school district levels, including student-centered policies and budgeting.

This paper concentrates on how the high school learning environment and instructional programs can be improved through practices that show great promise. Taking them to statewide scale will require significant changes in governance.

The paper builds on the findings of *Raising the Bar for PreK-20 Education in Oregon: Six White Papers*[1] published earlier by the Oregon Education Roundtable.[*] It draws especially on the third paper in the series, *Preparation*. At a time that Oregon must be raising the achievement and attainment levels of all students, that paper documents that the state's public education system is failing too many students in their teen years. Nearly a third of Oregon ninth graders do not make it to graduation on schedule, and among those who do graduate, at least 40 percent are not ready to succeed in postsecondary studies. The number of students diverted into remedial reading, math, and writing their first year, including 'A' students, suggests deep systemic problems. On the opposite end of the spectrum, talented students are often insufficiently challenged and engaged. A portion of high school students take postsecondary level courses as they move into their junior and senior years, but for the majority who don't, the senior year in particular is too often a waste of their time and of taxpayer money.

Practitioner Views, Uncommon Discourse. No one is more aware of this than our best K-12 practitioners themselves – teachers, counselors, and administrators on the front line. So are postsecondary educators and employers who receive skill-deficient students and watch them struggle or fail.

In May and June 2008 a selection of these K-20 stakeholders came together in two all-day forums under the theme Uncommon Discourse. They were charged to discuss the condition of service delivery and governance in Oregon education and to identify practices that show the greatest promise in preparing students for further success in postsecondary education, work, and life. Participants were encouraged to be candid, brutally so if necessary, with the assurance that their observations would not be attributed directly by name.[**] Their views, along with the earlier white papers, form the foundation for this paper, which investigates several promising practices in place across a number of Oregon high schools.

The structure of this paper is influenced by the national study *Good Policy, Good Practice*,[2] a collaboration of the National Center for Public Policy and Higher Education and the National Center for Higher Education Management Systems. Part I of that study offers examples of promising approaches to education improvement (i.e., best practices) that can be deployed to improve higher education results. Part II describes the tools of governance that can be used to support and ingrain those improvements.

This paper, it should be said, describes promising practice in enough detail to fuel further conversation, which is its primary purpose. As Oregon begins to implement its new high school diploma requirements, that conversation could not be more timely.

---

[*] This paper also benefits from the unpublished 2007 study *Rethinking the Budget Framework* (for Oregon's PreK-20 Education Enterprise), by Nancy Heiligman, with the Office of Budget and Fiscal Planning at Oregon State University, and John Tapogna of ECONorthwest.

[**] A number of them later agreed to be interviewed and cited for the views they expressed in those interviews.

SERVICE DELIVERY AND GOVERNANCE: UNACCEPTABLE RESULTS WHEN WE NEED TO BE DOING EVEN BETTER

As established in the six white papers, *Raising the Bar for PreK-20 Education in Oregon*, Oregon must dramatically increase the education attainment of a larger share of its citizens than the state does at present. The imperative is both personal and economic. Because of global competition and evolving technology, Oregonians must be better educated than ever to hold good jobs and keep the state economy competitive.

The Governor and Legislature have adopted an ambitious education attainment goal known by the shorthand 40-40-20. It means that 40 percent of Oregon adults should have a bachelor's degree or higher (compared with 28 percent now), another 40 percent should have at least an associate's degree or other technical credential, and the remaining 20 percent should have a high school diploma that represents a high level of academic and work readiness skills.

The current performance and capabilities of our public education system, especially for students in the teen-age years, is not adequate to the task.

Unfortunately, the current performance and capabilities of our public education system, especially for students in the teen-age years, is not adequate to the task. Two of the most troubling indicators are attrition of students in the education pipeline and declining education attainment at a time when the economy needs a higher level of education attainment from everyone, not just a few. To make matters worse this attrition and declining attainment are occurring at a time when the best educated, most skilled cohort in the workforce is beginning to retire.

Our hope for closing this gap, unfortunately, rests on an education model built in and for the 20th Century. What we need is one geared to the higher demands of the 21st Century.

Uncommon Discourse

On May 9 and June 3, the education stakeholders listed in Appendix A met in day-long sessions to drill down on this statewide gap in system performance and capability, in particular at the high school level and its connections to middle school and to postsecondary education. What they had to say confirmed the findings of the earlier white papers and suggested why Oregon, despite its best efforts, is making such slow progress in achieving better results for more students.

The two sessions examined four key questions about Oregon's public education system, in particular the portion that serves students in their teen years:

- By and large, what is the design of the current system?
- What are the assumptions that underlie that design?
- What are more appropriate assumptions that we should adopt?
- In adopting these newer assumptions, what will a new design for service delivery look like, and what kinds of governance will be needed to support it?

This is what a consensus of participants concluded in answer to these questions.

Current System Design

The prevailing model is out of date. With the caveat that there are exceptions in many districts and schools, participants believe that for the most part in Oregon schools serving students in the pivotal teen years are organized and run on an early- to mid-20th Century mass production manufacturing model. Students are grouped by age and run through the system in fixed units of time, all at the same relative pace despite their individual differences. Time is fixed, learning is optional, rather than the other way around. Teachers talk, students listen. Subjects are taught independently of one another. Students work

alone in their reading and other assignments. Memorization and other task execution are valued more than learning in context.

The focus is backwards. The education system is often more institution-centered than student centered. The way schools are organized and scheduled reflect less priority on the learning needs of students than on cost efficiencies, the prerogatives of the adults in the system (some union positions and contract provisions in particular), and an outmoded school calendar.

The system tolerates leaving some students behind, others unprepared. The education system professes the importance of education equity, but in fact, the system *functions* as it has for a long time. Our high schools produce a bell curve of high, average, and low performers – and a four-year dropout rate exceeding 30 percent. Among those who graduate, a significant portion is not prepared to meet the knowledge and skill demands of postsecondary education or today's competitive workplace.

The education system professes the importance of education equity, but in fact, the system *functions* as it has for a long time. Our high schools produce a bell curve of high, average, and low performers – and a four-year dropout rate exceeding 30 percent.

Outmoded Assumptions Underlying That Design

A belief persists that not all students can learn. Perhaps the most damaging outmoded assumption in our current education system – something ingrained in the belief of many faculty and shared by a portion of the total culture – is that not all students can be successful learners. Some student failure is believed to be inevitable, perhaps even necessary to keep system capacity from being overwhelmed.[*] Students who respond well to traditional teacher-centered, time-based instruction are respected as able learners. Those who do not are encouraged less, are tacitly allowed to drop out, or are shuffled into alternative programs. This is often most true of students from low-income backgrounds, of ethnic minority students, or of students who fall into both categories.

Public commitment to education declines beyond high school. High levels of education attainment are perceived as a general social good but less and less as a general social responsibility. The past 30 years, judging from postsecondary funding trends, Oregon has been retreating from support for postsecondary education and thus from students preparing for and pursuing an education beyond high school. There seems to be a general acceptance that higher levels of attainment should be financed to an increasing extent by students and their families rather than tax payers. By contrast, as a people we seem to view education up through high school as a public responsibility.

Public perceptions of high school are often romantic and outdated. A portion of our educators and the public has a sentimental attachment to high school as they experienced it rather than how it now needs to be. They can't come to terms with higher levels of academic rigor, higher expectations for all students, different models of learning, different relationships between teachers and students, and a blurring of the lines between high school and postsecondary study among high school students.

Assumptions, Delivery Design, and Governance More Appropriate to Our Needs

The stakes are too high to let any student fail. Educators and the public should see to it that each student becomes successful – not only to foster a competitive economy, but also to achieve social justice.

[*] At the time the current education model was developed, which was the beginning and middle of the 20th century, economic and social circumstances made it easier for assumptions of this sort to hold sway. The American workforce and society needed only so many managers and professionals and only they, it was believed, needed to be well educated. Everyone else who worked in manufacturing, skilled trades, and services followed orders and did not need to be well educated to earn a decent living. That all changed in the 1970s when the United States began to lose its manufacturing monopoly, when computer automation wiped out many repetitive-task jobs, when off-shore sourcing and relocation of U.S. manufacturing off shore eliminated millions of other well paying jobs, when thousands of factories closed, and when higher levels of education began to garner a premium in employment security and income.

Education is the key to lifelong opportunity, and no child should be denied that key. Toward that end, education stakeholders need to realize and believe that every student can succeed in learning. In the same vein, they need to understand that each student learns differently. Because of that, we need to customize the learning process for each student. We should start by abandoning the one-size-fits-all education delivery model.

***Best practices can be transformative*.** In the foreseeable future, Oregon's public school infrastructure will continue to be the main vehicle for delivering public education. Notwithstanding the fact that this system is not serving all students well, we don't have the option to abandon or replace it. That doesn't mean, however, that we shouldn't have a sense of urgency to transform it in a way that produces better outcomes for more students.

Our public school infrastructure will continue to be the main vehicle for delivering public education. That doesn't mean we shouldn't have a sense of urgency to transform it so it produces better outcomes for more students.

Best practices allow schools to push the envelope in transformation. They have the advantage of being tested and adjusted in real circumstances. Many of them are initiated by practitioners, so they have more credibility and a better chance of attracting the peer interest necessary for successful adoption.

Over time, and perhaps more quickly than anticipated, some practices will become a force in their own right. The schools will have to accommodate and incorporate their advantages or risk losing students to them. We also need to be flexible about both new and old practices. All of them will evolve over time with new requirements placed on graduates in the form of economic competition and everyday living. Some approaches will change, some will disappear, and others will emerge.

***There are promising delivery options available to take to larger scale*.** Throughout Oregon educators are pursuing more promising instructional approaches that – if taken to larger scale – could transform high school education and its outcomes. Not all school districts have adopted these practices, but many have done so in various degrees and stages. The following pages describe several practices that appear to be making a difference.

Education governance needs to encourage and accommodate student-centered transformational practices. The practices described in the following pages can be aided by governance in a variety of ways. The most important may be first to always ask the question, Is this good for kids? If we can answer "yes" in our laws, our education funding and budgeting, in the way our institutions work together, in our labor agreements, in our professional development, and in our classroom performance, then new practices that work – but that may be a departure from a century of ingrained habit – will flourish and give more students better outcomes.

Here is a sampler of comments, edited for brevity, that reflect the tone of the discussion on governance:

"The governance system has to favor a culture of change and innovation to meet evolving needs, as opposed to a culture of rule making and compliance."

"The only metric that matters is student success."

"Accountable governance requires excellent data systems to measure student outcomes and school performance."

"If we want a uniform experience for students across PreK-20, we need a uniform governance structure."

"At a minimum [in our education budgeting and expenditures], money should follow students."

"The best local governance invests authority in schools to create high performing, self-motivating professional learning communities that focus on outcomes and exciting learning for students."

"There should be no public school attendance boundaries, so students can choose the schools and programs that meet their needs."

"Education budgeting should be thought of as purchasing education services for students."

"There should be stronger partnerships between secondary and postsecondary schools to improve the transition between the two levels for students."

THREE BEST PRACTICES IN OREGON

This paper looks at three promising practices, what makes them appealing, the challenges of taking them to larger scale, and what will be required of our state and local governance systems to support that effort. The practices are proficiency-based instruction, small learning communities, and credit-based transition into postsecondary study for high school juniors and seniors. Proficiency-based instruction receives the most attention here because it appears to have the greatest potential to transform high school education in Oregon.

A number of other practices also appear to be making a noticeable difference in Oregon school districts. These include intensive doses of reading and math, particularly at the grade 8 to grade 9 transition, credit recovery classes and mentoring, intensive student and family intervention where students appear to be struggling, depressed, or skipping school, professional learning communities, and online learning in a range of formats.

The best practices discussed in this paper are not mutually exclusive. Each can be, and frequently is, applied in combination with other best practices.

The best practices discussed or touched upon in this paper are not mutually exclusive. Each can be, and frequently is, applied in combination with other best practices. For example, Redmond High School is implementing its proficiency-based approach to instruction in the context of a new freshman academy, a form of small learning community. Another small learning community program, the Oregon Small Schools Initiative, has a very successful proficiency-based program in Beaverton's Health and Science High School. The most successful proficiency-based assessment and instruction programs have strong professional learning communities. Important elements of online schools and learning, such as student self-pacing, student responsibility for learning, and continuous assessment keyed to rigorous standards, are inherently proficiency-based. Some districts, such as Forest Grove and Parkrose, are applying an extensive menu of best practices. Although the Portland School District does not appear to have embraced proficiency-based instruction, it is employing a range of other best practices to improve student success.

Characteristics Often Shared Where Best Practices Occur

Among best practices in general, the most successful approaches seem to share the following characteristics. They might even be regarded as essential criteria for success.

- The district or school has a commitment to investigate, develop, and deploy best practices.
- Interest in best practices is engendered among practitioners, rather than imposed top down.
- The practices are modeled on similar successful practices or principles applied elsewhere.
- They are deemed successful here based on evidence or success achieved in place here.
- Evidence of success is based on rigorous, objective evaluation. Ideally, evidence of success is comparable to a control group within the same service population, but where that isn't possible, data indicating success is comparable to a similar place or population.
- The preceding three points imply and require a reliable data system that routinely generates reports on outcomes that are easy to understand and analyze.
- The practices can be replicated and taken to scale by competent, well trained personnel anywhere (they do not depend on star talent).
- The practices demonstrably advance stated public policy outcomes in education.
- The practices are attractive to students, teachers, parents, and other stakeholders.
- Practitioners document and share what they have learned and achieved with others in the form of data and stories, and in a variety of formats, including print and online materials and personal testimony.

PROFICIENCY-BASED PRACTICE

Proficiency-based assessment and instruction, often called credit for proficiency,* could be one of the most promising practices now emerging and gathering adherents in Oregon education. It is being practiced in only a handful of school districts today, but its initial results surpass conventional assessment and instruction. Among all the best practices they discussed, participants at Uncommon Discourse identified proficiency-based assessment and instruction as the practice that can probably improve student learning the most and at the least cost.

Proficiency-based assessment and instruction is the practice that can probably improve student learning the most and at the least cost.

Proficiencies can take us where we want to go. They believe, further, that it can transform teaching and learning and help Oregon achieve the ambitious education attainment goals embodied in the 40-40-20 formulation. Proficiency-based practice is *real* standards-based practice. In a true standards-based system, which Oregon has been laboring to achieve the past 17 years, schools and teachers would build the entire learning experience for students on achieving proficiencies in well defined skill and knowledge standards. Teachers in the few schools who are now engaged in proficiency-based instruction use those standards, in both skills and subject matter content, to 1) set performance objectives that students see, understand, and strive to achieve, 2) gauge student progress through formative assessment, 3) individualize the learning experience (in particular through projects and collections of evidence) for each student based on those objectives and ongoing assessments, and 4) determine that students are proficient in the standards through summative assessment.

Oregon does not lack for both high and plentiful standards. It has well-defined standards for core academic subjects, standards for essential skills, and standards for career-related skills and behaviors. The state's content standards – which it adopted in conjunction with the optional CIM and CAM certificates, and which form the basis of state benchmark assessments – are academically rigorous, and even now they are being updated and improved.** Any student who achieves them is probably ready to succeed in postsecondary education and work.

Oregon will not achieve statewide, standards-based secondary education and its benefits in student attainment without resolving the gap between its standards and predominant classroom instructional practice.

Standards-based education doesn't exist unless it is practiced in the classroom. According to proficiency advocates, however, these standards do not form the backbone of classroom practice in most Oregon high schools, which may explain why so many students perform poorly on statewide assessments keyed to the standards and why so many high school graduates flounder when they move on to postsecondary education. Proficiencies that define Oregon's standards are harder for students to acquire, if they acquire them at all, in a traditional teacher-centered classroom based on seat-time and grades influenced by a host of subjective factors. Oregon will not achieve statewide, standards-based secondary education and its benefits in student attainment without resolving the gap between its standards and predominant classroom instructional practice.

Oregon is taking one step to close this gap in its new high school diploma requirements, which will go into effect with the graduating class of 2012. That step is requiring students, as a condition of receiving

---

* "Credit for proficiency" appears to be the most popular term for the concept of helping students to achieve proficiencies based on standards (sometimes called *standards-based instruction* or *standards-based assessment*). The term, however, doesn't adequately convey the impact this practice represents on instruction, learning, assessment, and their relation to standards. Moreover, credit for proficiency is a term used in postsecondary education where it means something different, typically credit granted where a student can demonstrate proficiency in a set of skills required as a prerequisite for admission to an upper level course.

** Oregon's PASS standards, which indicate college readiness, are even more rigorous, and they are available for use as well.

the new diploma, to demonstrate proficiency in four essential skill standards: reading, writing, applied math, and oral presentation.[**] But state policymakers have not yet decided whether or how to require similar demonstration of proficiencies in content standards. Except for districts that adopt proficiency-based instruction on their own initiative, that part of Oregon secondary education remains seat-time and grade-based.

There is some indication that a number of school district personnel are anxious about how to implement and assess the essential skills requirement. State officials have taken pains to explain that students will have ample opportunity to demonstrate essential skills proficiency in any one or combination of several ways, including 1) achieving a passing score on statewide assessments in reading, writing, and math, 2) completing a work sample or student project that passes muster in a locally scored assessment, or 3) achieving a passing score on another standardized test yet to be determined and approved by the state.[**] Proficiency practitioners and advocates say such worries would not even surface in a proficiency-based system because essential skills (the four to be required plus others) would be acquired and demonstrated by students as a matter of course in the varied learning formats of proficiency-based instruction.

Proficiency practice has gained a foothold here in a short time. Oregon laid the foundation for proficiency-based instruction in 2002 when the State Board of Education adopted a range of options for awarding students credit. Oregon Administrative Rule 581-022-1131, titled Credit Options, included not only typical classroom work and exams as a basis for awarding credit in required and elective courses, but also documented prior experience, independent study, internships, group projects, and sample work products that demonstrate student skills and knowledge. The earliest applications of the proficiency credit were mostly to student experiences outside the classroom in non-core subjects. In fact, the Department of Education supported a pilot program on this application of proficiency credit in a handful of Oregon high schools from 2004 through 2006. School districts in the program included Beaverton, Canby, Albany, Gresham-Barlow, Hood River County, Scio, and Wallowa. About that time the Business Education Compact began to train school personnel in the concept, especially in out-of-class practicum and project work. Since then, a number of schools have embraced it as a way to teach and evaluate students in the classroom in core subjects.

The experiences of these schools, a number of which are discussed below, have shifted the conversation about proficiency from a focus on "credit" to a system of instruction, learning, and assessment based on student proficiency in accepted content standards rather than seat time or grades as an indicator of what students know and can do.[***]

What Proficiency-Based Practice Replaces

Time becomes the variable rather than learning. Proficiency is an alternative to the current time- and grade-based system. In this system students typically study a given subject for 130 hours and put in 990 hours of classroom time a year, and they are credentialed in a system of letter grades. Critics of the current system and proponents of proficiency argue that letter grades are so arbitrary, so inconsistent, and in many cases so inflated they are effectively meaningless.

[**] The other significant change in the new diploma is that it raises minimum Carnegie Units required for graduation from 22 to 24, with more credits required in core subjects such as math, English, and science. Some Oregon high schools already meet or exceed that requirement as a matter of local school district policy.

[**] As currently envisioned, student reading proficiency will be assessed on a statewide standardized test administered on paper or online. Writing and applied math may be assessed this way on paper or online but will probably be assessed most often by teachers using state-developed scoring guides. Oral presentation will be assessed locally with state-developed scoring guides.

[***] Proficiency-based instruction, or standards-based instruction, can trace its roots to what was called standards-based or outcome-based reform philosophies of the 1980s and '90s, which focused on objective standards that all students are expected to meet by demonstrated performance.

The seat-time or time-based system, consisting of Carnegie Units* of credit, is what Clayton M. Christensen, a Harvard professor and expert on innovation, calls "monolithic batch system" teaching. "When a class is ready to move on," he writes, "all students move on, regardless of how many have mastered the previous concept (even if it is a prerequisite for learning what is next). On the other hand, if some students are able to master a course in just a few weeks, they remain in the class for the whole semester." As a result, he contends, a portion of students tune out from either boredom or frustration. "Both the bored and the bewildered see their motivation for achievement shredded by the system."[3]

> **If experience, research, and common sense teach nothing else, they confirm the truism that people learn at different rates, and in different ways with different subjects. But we have put the cart before the horse: our schools and the people involved with them—students, parents, teachers, administrators, and staff—are captives of clock and calendar. The boundaries of student growth are defined by schedules for bells, buses, and vacations instead of standards for students and learning.**
>
> **– from *Prisoners of Time*, Report of the National Education Commission on Time and Learning, April 1994**

Objective assessment replaces a grading system often tainted with subjective factors and inconsistency across classrooms, schools, and districts. In current prevailing practice, teachers assign grades on the basis of points awarded for a range of tasks that include performance on tests and papers. But a host of subjective factors – not related to proficiency – are often mixed in. These can include attendance, student effort, student discussion in class, homework, and extra credit work. Grading students "down" from their proficiency level is also employed as punishment for various behavioral infractions, including turning work in late. In one case, published on a teacher's website, students lose points if their parents don't sign off on a course syllabus. The net effect of these non-objective factors is that no one knows exactly what capabilities high school grades signify. Grades awarded in one class, one grade level, one school, or one district may mean something entirely different than similar grades awarded in another. A student with a 'C' average at one high school may be doing the kind of work that would gain an 'A' in another. Without strict adherence to proficiency-based assessment, grading becomes susceptible to inflation, which can arise from any number of intangible factors, such as teacher sympathy for student effort or parental or student pressure. In fact, there is evidence and widespread belief that both high school and postsecondary grade inflation is rampant in American education. (Secondary grade inflation bedevils postsecondary educators; postsecondary grade inflation bedevils employers.) As a consequence, postsecondary educators report that some high school 'A' students arrive at their doors well prepared to succeed and other 'A' students have to take remedial classes to shore up weak skills in reading, writing, and math. One postsecondary admissions official told Oregon's Credit for Proficiency Task Force that she is rooting for adoption of a proficiency-based system because she has "no idea" what high school grades indicate.

> **No one knows exactly what capabilities high school grades signify.**

Characteristics of Proficiency-Based Instruction

What then, makes proficiency-based instruction so compelling to its advocates?

It's student centered. First, it consciously puts the student at the center of the learning process. In doing so, it rejects the notion that some students will succeed and some will not. Proficiency-based instruction expects that *all* students will achieve at a proficient level and move on successfully. In effect, it does away with the bell curve.

---

* A Carnegie Unit is a standard of measurement representing one credit for completion of a one-school-year course meeting daily.

COMPARISON OF TRADITIONAL AND PROFICIENCY-BASED SECONDARY EDUCATION

	Traditional	Proficiency-Based
View of Learners	Some will excel, some will do average work, a portion will fail.	All of them can achieve at high standards; failure is not an option.
Learning Program	Time based; learning is a variable. It's effective for a portion of students	Learning based; time is a variable. It's effective for all students.
Grades	Based on various, and sometimes subjective, points rather than proficiencies; may reflect quantity over quality (such as extra credit work); may be used in part to punish, reward, or control student behavior; subject to inflation. Grades are sometimes locked in before a course ends.	Indicate only what student has learned (knows and can do) by demonstration of proficiency; quality of work is based on agreements about evidence of proficiency. End-of-course grades reflect student proficiency *at* end of course.
Assessment	Relies heavily on summative assessment, including standardized testing.	Includes summative assessment, but heavily favors formative assessment as a feedback mechanism to continuously measure and guide student learning, and to drive and improve instruction.
Nature and Structure of Schools	Often adult centered in practice. Self-contained education factories in a management hierarchy modeled on 20th Century industry.	Student centered in practice. Home base for flexible learning experiences where students can assume more initiative, work in teams, and learn in community settings, online venues, and other education institutions as well as in their school of record.
Curriculum	Disciplines are independent of one another and content is independent of standards for postsecondary success.	Based on recognized standards. Rigor and relevance are driving criteria. Disciplines are often integrated. Content is keyed to what students need for postsecondary studies and job success.
Student Credentialing	Students accumulate graded units of instruction to graduate through "seat time," regardless of skill levels acquired or grades assigned, and a standard diploma is regarded as the end point of the high school experience. For students capable of doing more and advancing while still in high school, the senior year is often spent coasting to the finish line.	Students are assessed to assure that they have acquired high standards of knowledge and skills defined by minimum state diploma requirements matched to state standards. Students with an interest in advanced certification and credits (AP, IB, college credits) are supported in going beyond minimum diploma requirements.
Teachers	They dispense knowledge about subject matter; lead class discussion, make assignments, motivate students, assign grades.	They do many of the traditional things but also are content experts, mentors, resources, partners in school management, partners with community resource providers, skilled assessment practitioners, members of teaching teams, and members of professional learning communities.
Students	They receive or absorb information passively, recite when asked, achieve on tests. Often don't know at the beginning of a course what constitutes successful learning.	They envision and help plan their education path, partner in their own progress, learn by observation and application as well as by reading and taking class notes, and they develop both individual and group skills. From the very beginning of a course, they know precisely what proficiencies demonstrate desired attainment of knowledge and skills, and they work to achieve those proficiencies.
Student Performance Data	Infrequently collected and analyzed, if at all.	Frequently collected and analyzed (currently and longitudinally) by teachers, professional learning communities, and curriculum and instruction administrators for program improvement.

It's standards-based and focused on student proficiencies. Content and skill standards define not only what students should be able to know and do to succeed in postsecondary studies, work, and life, but also how well. Standards are drawn from what thoughtful teachers, employers, and others at all levels have concluded are the knowledge and capabilities that individuals must possess to function well in general, and in today's more demanding job market. As noted above, Oregon has well defined content and skill standards but educators can enhance these from a wide range of additional standards, and, in proficiency-based systems, many do. In addition, schools may identify what are sometimes called "power" or "core" standards as more important than others because these are regarded as key or prerequisite knowledge and skills without which students cannot advance to others.

Proficiency-based instruction expects that *all* students will achieve at a proficient level and move on successfully. In effect, it does away with the bell curve.

Standards form the foundation for proficiencies* that students can demonstrate and that teachers can assess in a variety of formats such as tests, written papers, oral presentations, individual or group projects, collections of evidence, and performance in a work or service setting. Assessments may be diagnostic (to form a baseline of where students are before they start a learning program), formative (an ongoing part of the learning process), or summative (to determine what students have gained as a result of the learning program).

Ongoing assessment is integral to instruction and learning. In a proficiency-based system, formative assessment drives instruction and therefore has primacy over summative assessment. The teacher employs assessment as part of a daily and weekly learning feedback loop to determine what a student still needs to learn to achieve proficiency. In addition to quizzes and tests, teachers use informal questioning, observation, discussion, and student presentation to gain a better understanding of each student's progress in gaining pertinent skills and knowledge. The student works at gaps in proficiency until they are closed. This contrasts with the application of summative assessment primarily to fix the student somewhere on a scale of success or failure indicated by points or grades. In a proficiency system, failure or poor performance may be part of the student's learning curve, but it is not an outcome.

In a proficiency-based system, formative assessment drives instruction and therefore has primacy over summative assessment.

Because assessment has such a key role in standards-based education, and because so much assessment occurs at the classroom level, teachers and professional learning communities are developing a deeper understanding of assessment principals and methods, which are also evolving with advances in measurement and statistics, technology, cognitive psychology, and learning in the domains. Teachers are becoming more skilled in quantitative measurement, observation, and interpretation of student performance to determine student progress toward and achievement of proficiencies. Newer understandings of what learning looks like, and how it can be measured, are exemplified in such works as *Knowing What Students Know, The Science and Design of Educational Assessments*[4] by the National Research Council. Closer to home, Rick Stiggins of the ETS Assessment Training Institute recently issued the *Assessment Manifesto*,[5] which calls for the elevation of assessment *for* learning in education practice.

Students know where they're going, propel themselves, and take various paths. In a proficiency system, students take more responsibility for their progress. The teacher makes it clear from the beginning precisely what proficiencies they are expected to master and what they will have to be able to do to demonstrate that they have attained those proficiencies. Then the teacher (or the teaching team) gives them ample support and allows them to move at their own pace in a variety of learning activities.

* Some proficiency-based teachers believe the standards would be more helpful if they identified more specifically, in terms of behavioral objectives, the proficiencies that indicate accomplishment of standards.

Proficiency practitioners report that this changes the student mindset and vocabulary. Students speak of proficiencies they have acquired or have yet to acquire, rather than points or grades.

Instruction and learning break out of the "cemetery model." Proficiency-based practice typically goes beyond what one school superintendent calls the "cemetery model" classroom in which students sit in rows receiving what is sometimes called direct or frontal instruction – knowledge dispensed by the teacher in a lecture format, often with teacher moderated discussion and drills, seatwork, and reliance on textbooks. There is still room for direct instruction in a proficiency-based system because some of it is useful and effective, but it doesn't work well as a steady diet for all students. Proficiency-based instruction balances a variety of approaches that also include hands-on learning activities (in and beyond the classroom), student-led discovery, group projects, and use of online resources. Textbooks are used sparingly if at all. Learning activities often integrate knowledge from different subjects. The nature of the learning activities typically call on students to improve their skills in planning and organizing, working in teams, taking personal responsibility for assignments, finding and analyzing data, documenting their work in writing, and presenting findings.

Teaching flourishes. In this setting the teacher deploys a broader array of learning tools, engages students in a wider range of formats, and gauges student progress daily and weekly on well defined competencies. Managing a learning environment this way, often in tandem with like-minded colleagues, is less restrictive and more creative than direct instruction. Practitioners also report that the degree to which learning is individualized in proficiency practice makes the student-teacher relationship far more rewarding.

Professional learning communities enhance student success and enrich teaching practice. The creation and maintenance of a professional learning community in a school is a best practice in and of itself. It is also a frequent corollary to proficiency practice, creating a continuous means of improving curriculum, instruction, and assessment, developing teacher capabilities, and improving staff cohesion. A professional learning community typically consists of teachers, and often counselors and administrators, who are organized in smaller teams around grade levels, academic subjects, or other common factors to improve student learning and teaching practice. They are collaborative, oriented to inquiry and evidence, quick to take corrective action, and committed to results and continuous improvement. These learning communities appear to work best where building professionals buy into the practice, organize themselves, and secure ample time in the daily and weekly schedule to meet, share approaches and results, and make improvements. There is a large body of literature on professional learning communities, and a vast number of entries online. A good basic site on the concept is http://www.allthingsplc.info/.

Benefits of Proficiency-Based Practice

Everyone is expected to succeed. Education equity and access is a growing concern, especially as Oregon school children become increasingly diverse and as achievement disparities persist in secondary education. Proficiency-based practice holds the promise of leveling the playing field, expecting all students to be successful and giving them an equal chance to achieve at high levels. Because learning is interdisciplinary and often made more relevant by hands-on projects, students achieve a better grasp of material both conceptually and contextually.

There should be no graduates of a proficiency-based program who need remedial instruction in postsecondary education.

Learning itself is a valued skill. Because students know explicitly the skills and knowledge they must achieve, and because they take more responsibility for their progress, they learn better *how to learn*.

Everyone does succeed. Because students don't move on until they have gained demonstrated proficiency, they are fully ready for the next level of study. There should be no graduates of a proficiency-based program who need remedial instruction in postsecondary education. This alone would prevent high schools from sending unprepared graduates to the next level, give more first-year

postsecondary students a strong start, and relieve taxpayers from the burden of paying for the same instruction twice through remedial programs.

Standards-based education is good for mobile students. To the extent that standards-based curriculum and proficiency-based instruction is offered across Oregon school districts, it has the potential to maintain equity and access in curriculum and instruction for that 10 to 20 percent of students who frequently move among school districts. These students, often from low-income families, frequently have the most trouble adapting to different curriculum and instruction in new settings.

Proficiency-based practice supports Oregon's direction in personalized learning. Since 2002 State Board of Education policy has required schools to provide students with personalized learning experiences, and that policy is built into Oregon's new diploma requirements to be implemented fully by 2012. Proficiency-based practice, which lends itself to both in-classroom and out-of-classroom learning, is especially well suited to support personalized learning as expressed in the policy. Requirements include 1) that students have an education plan and profile to guide them toward their goals, 2) that students participate in real world experiences in the workplace, community or school that connect to classroom learning, 3) that students have an "extended application" experience that calls for them to apply thinking and problem solving skills to tasks related to their interests, and 4) that students develop a good work ethic and a range of essential and career-related process skills such as reading, writing, applying mathematics, making oral presentations, and working well in team settings.

Where Proficiency-Based Instruction Is Under Way

Apart from second language teaching, where it is well established, proficiency-based instruction is relatively new and so geographically scattered – both in Oregon and beyond – that what we know about its application depends on word of mouth, occasional journal articles, and random internet postings. There appear to be no international, national, or Oregon-wide surveys of its practice.

Beyond Oregon its successes have drawn attention in locations as diverse as Alaska, Rhode Island, and Wisconsin, and here in the state it is being used in comprehensive high schools, small rural schools, and small learning communities within larger school districts.

Chugach (Alaska) School District. Proficiency-based education made its public school debut in the United States with dramatic results in one of the most remote school districts in North America. In 1994 student progress could not be much worse in this south-central Alaska district of then 214 students, half of them Native Alaskans, scattered over 22,000 square miles and three school sites. Dropout rates were high, test scores were low, and the average student was reading three years below grade level. At that point, with community backing, Roger Sampson, who was then superintendent, began a complete overhaul. By 1999, composite standardized test scores soared from the 28th percentile in 1995 to the 72nd percentile. In the same period, reading scores rose from 28th to 71st, language arts from 26th to 72nd, math from 54th to 78th. When state proficiency exams began in 2000, Chugach students topped the Alaska average by 8 percent in reading, 17 percent in math, and 35 percent in writing. The percentage of Chugach students taking college entrance exams increased from zero to 70 percent. The district was recognized for this accomplishment in 2001 when it won the Malcolm Baldridge National Quality Award, making it the smallest organization ever to be so recognized.

Chugach turned things around by strengthening its partnership with the communities it serves and by throwing traditional education practice out the door.

Apart from its commitment to quality improvement, Chugach turned things around by strengthening its partnership with the communities it serves and by throwing traditional education practice out the door. With approval of state education authorities, Chugach eliminated Carnegie Unit seat time and letter grading. Curriculum and instruction were standardized on proficiencies in 10 areas. Evaluation was keyed to the standards. Chugach created an individual learning plan allowing each student as little or as long as

necessary to achieve the proficiencies. Teachers began to facilitate learning in a variety of formats in and out of the classroom. Students were given additional support to improve their social skills, broaden their cultural horizons, maintain good health, serve the community, and gain real world work experience for the transition out of high school.

Since it first reached national attention, Chugach has continued to achieve impressive outcomes with its students, which now number 247. In 2006-07 assessments, nearly 91 percent of Chugach students in grades 3 through 10 were either advanced or proficient in reading, compared to 82 percent statewide. In writing they bested their state peers nearly 78 percent to nearly 75 percent, and in math, 75 percent to 72 percent. In 2007-08 the district exceeded the Annual Yearly Progress benchmarks of No Child Left Behind by wide margins. Two-thirds of the students who graduated between 2003 and 2007 went on to postsecondary education where they have either graduated or persisted in school. Among the rest, all but one are employed.

Proficiency practice has helped Chugach go from 50 percent annual teacher turnover to nearly zero.

Proficiency practice has also agreed with Chugach teachers. Up to the time of its transformation, the district had a 50 percent annual turnover in teachers. That attrition dropped to near zero, with only a few teachers retiring and several others leaving to become consultants on the proficiency model.

The Met. The Met, a network of six small public high schools in Rhode Island, is probably the most pronounced embodiment of a student-centered education philosophy expressed in the motto "educating one student at a time." It inspired the formation of The Big Picture Company, which has developed principles for the pedagogical design of 68 schools across the nation, including Terra Nova High School in Beaverton. The Bill & Melinda Gates Foundation has prominently supported expansion of The Met model.

At The Met students design their own course of study along with teachers, advisors, and parents, and they learn at their own pace. They build collections of work, which they exhibit periodically, and they accomplish a large share of their learning through internships in community settings. Each campus has about 120 students. There are no grades, no bells, and no block scheduled classes. Unlike most proficiency-based programs, The Met has no standardized curriculum, no published standards and proficiencies. But it does have a framework of high standards and academic rigor. Just as study is highly individualized, so is assessment, which is based on real-world standards and which focuses on student progress in five well developed categories: empirical reasoning, quantitative reasoning, social reasoning, communication, and personal qualities. Assessments are based in narratives written by both students and their advisors. Students also keep journals to reflect on their learning. As a bridge to postsecondary education, many students take courses at local colleges.

Outcomes at The Met are impressive. Since the school graduated its first class in 2000, 98 percent of its students have been accepted into a variety of respected colleges, 80 to 90 percent have enrolled, and about three-quarters have persisted, which The Met notes is remarkable because most are first-generation college-goers.

Madison (Wisconsin) Metropolitan School District. This district of 25,000 students, the second largest in Wisconsin, began standards-based reform in the latter half of the 1990s. It has developed a comprehensive array of content standards even more rigorous than Wisconsin's high state standards. It has made a concerted effort to tighten the alignment between standards, curriculum, instructional practices, assessments, and professional development. In 2001-02 the district implemented proficiency-based assessment and eliminated grade-based report cards at the elementary level. It recently did the same with its middle schools and is now working with stakeholders on similar redesign at the high school level.

Adams County School District 50. This school district, which serves 10,000 students in the suburb of Westminster north of Denver, Colorado, is planning a conversion to a proficiency-based system as comprehensive as the one that Chugach undertook in the mid 1990s, and for much the same reason.

About 72 percent of the students in this district are eligible for free or reduced lunch, 38 percent don't speak English as a first language, and the school has been placed on a state watch list for poor performance. School leaders and the community decided they had to do something different than keep using the old delivery model. The district's initiative complements an omnibus education reform package that Gov. Bill Ritter pushed through the Colorado Legislature in May 2008, including a strong standards-based component, but it's on a much faster schedule than Colorado's statewide implementation plan for K-12 reform.

Standards-based reform, featuring proficiency-based assessment and instruction, will be a feature of the district's 13 elementary schools and three middle schools beginning in the fall of 2009. It will be implemented in the district's three high schools in the fall of 2010.

Adams County hasn't worked out all of the details yet, but wants to do away with time-based units and grade levels, allowing students to move through a number of levels defined by proficiency. Standards will be clearly defined so teachers know exactly what they are expected to teach and students are expected to learn. Students may use a variety of ways to demonstrate what they know and can do. Proficiency will be assessed at four performance levels, and students will be permitted to advance only if they perform at level 3, "proficient," or level 4, "advanced." The district has not decided yet whether to stay with or abandon letter grades, but if it keeps grades, they will be proficiency-based.

The district has identified 10 rigorous performance levels in 10 content areas that students will need to pass through in order to meet local graduation requirements. It has also identified levels 11 and 12 in some of the content areas which will enable students to go beyond graduation requirements and earn college credit.

Oregon Schools Are Also Pushing the Envelope

Although they are still in a distinct minority, an increasing number of teachers and administrators in Oregon districts are pioneering proficiency-based instruction in the classroom and in core subjects, often without fanfare and working within their existing budgets and human resources. As noted earlier, there is no comprehensive survey of proficiency-based practice in Oregon, so these stories are presented to illustrate approaches to proficiency in a variety of settings.

Redmond High School. In fall 2007 Redmond began what it hopes will be just the first phase in converting its 1,700-student high school to a proficiency-based instruction and assessment system. It did this with the creation of a freshman academy, which also provides an intensive "family" support environment for its 300 ninth graders. Redmond is adding the proficiency approach to the 10th grade in 2008-09, and then it wants to move it to 11th and 12th grade in the subsequent two years.

An increasing number of educators in Oregon are pioneering proficiency-based instruction, often without fanfare and within their existing budgets and human resources.

Whether or not it can stick to this schedule remains to be seen. Redmond has strong support from its superintendent and board. It was very successful in recruiting its first 18 teachers to the freshman academy and then preparing 10th grade teachers for proficiency-based practice in 2008-09. According to Michael Bremont, assistant principal and curriculum director, these teachers embraced the approach, developed its implementation, and treat it with a sense of ownership. However, many of the most adventurous teachers have signed up. Expanding proficiency into faculty ranks that may be unsure of the new practice, skeptical, or even hostile to it may be more difficult.

As a complement to proficiency efforts at Redmond High School, the school district has been planning since early spring 2008 to create a charter school that's completely proficiency based, starting with 50 to 75 students and growing to about 200. Redmond Proficiency Academy (its tentative name) would operate at its own site six days a week from 9 a.m. to 8 p.m. Faculty would be drawn from a mix of certified teachers and registered professionals (those without a teacher education background but with industry or professional credentials). Teachers would be on non-union short-term contracts.

"We believe there are benefits to providing a proficiency-based school in an alternative setting that will allow students learning options they can't find in a traditional setting due its governance structure." Bremond said. "We'll be able to use what we learn from the charter to assist our progress at Redmond High School. The charter school will go forward regardless of our progress at the high school."

Like Chugach which inspired it, Redmond saw that many of its students were in crisis. "We had students at 3.5 GPA and above while they were here who needed remedial support in college and were scoring less than 1000 (combined) on their SATs," said Bremont. "Seventy-three percent of our graduates needed remedial math, 60 percent remedial writing and reading."

"We had students at 3.5 GPA and above while they were here who needed remedial support in college and were scoring less than 1000 (combined) on their SATs. Seventy-three percent of our graduates needed remedial math, 60 percent remedial writing and reading."

Many of Redmond's incoming ninth graders in particular were struggling. The year before the freshman academy conversion, 12 percent of ninth graders failed all of their courses and 18 percent failed two or more classes. This was worrisome because nationally 60 percent of freshmen who fail two or more classes drop out of high school. Redmond freshmen had an 18 percent dropout rate that represented more than 55 students, and its discipline referral rate for ninth graders ran above 40 percent.

In the first year of the conversion 60 percent of Redmond ninth graders demonstrated proficiency in their subjects the first time through, and Bremont estimates that fewer than 3 percent of students were still struggling. The dropout rate went to zero and discipline referrals fell to 8.7 percent. Attendance also improved from 91 to 92 percent, which is significant because a 1 percent difference spread over the number of classes involved represents a large number of absences. In regard to academic improvement Bremont said reading is telling. "We do know that 56 percent of our freshmen pass the state's 10 grade CIM reading standard, versus 62 percent of statewide 10th graders, so only six percent of the state's 10th graders are ahead of where our ninth graders are."

Teachers recruited for the freshman academy used six days of release time in the winter of 2007 to plan the program. During the summer the same teachers attended a paid 10-day program development workshop, with five of those days assisted by Mike Call, an Atlanta-based expert in creation of freshman academies. Redmond's grade 10 teachers went through a similar program development process in the summer of 2008. Teacher retention in the ninth grade program is high.

In a proficiency system, formative assessment is the key link between instruction and standards. For its grounding in formative assessment, Redmond relied on *Checking for Understanding*[6] by Douglas Fisher and Nancy Frey and *Classroom Assessment and Grading That Work*[7] by Robert Marzano. For proficiency standards, Redmond adopted a combination of Oregon content standards, College Board standards, standards from the Standards for Success (S4S) program at the University of Oregon, Oregon PASS standards, and even some standards from Virginia.

Unlike some proficiency programs, which have abandoned grades in favor of numerical measures of proficiency, Redmond's proficiency-based classrooms still use letter grades. However, the grades are gauged strictly to proficiencies based on standards. They are not skewed by upgrading or downgrading for subjective factors.

Bremont said the biggest challenge that teachers face in changing to a proficiency program is the amount of labor it takes to create scoring rubrics to assess student progress. "State [of Oregon] and College Board rubrics are OK," he said, "but we need our own how-to on rubrics. The state has developed only 10 percent of the rubrics needed. But the state could never develop a rubric for everything needed. Rubrics have to be tailored to the teachers and the assignments. The key is how to write a rubric that is meaningful for a student to translate learning into demonstration." Redmond is working on that challenge right now.

Scappoose High School. Proponents argue that proficiency-based education is contagious among teachers once they understand its power. Scappoose High School may be the best proof of that assertion. That contagion started in 2006 when Michelle Parsons, a social studies teacher at the high school attended an Oregon Department of Education meeting where Doug Boyer described in-class proficiency practice he was applying in his science teaching at Beaverton's Southridge High School. Inspired, she developed an out-of-class proficiency-based summer school program that turned out so well she decided to take the concept into her classroom in the fall.

Proponents argue that proficiency-based education is contagious among teachers once they understand its power.

That caught the attention of Rebecca Steinke, who was then a second-year, second-career science teacher at the school with a background in medical science. Unhappy with what she described as a lecture- and textbook-approach to teaching the first year, Steinke said what Parsons was doing "got me really excited." Five weeks into the fall trimester, and convinced her students were "hating science" in the traditional class format, she started planning a proficiency-based biology class that she implemented in the second trimester. In the third trimester, she taught oceanography with the same approach. After the first week in both classes, she said, "the kids loved it." She added, "They don't talk about grades any more. They talk about proficiencies and how well they are doing to achieve them."

They are achieving them very well, apparently. Steinke said four years ago only 41 percent of Scappoose students were passing the state's CIM science standards. Seventy-eight percent of Scappoose students now meet those science content standards. She said her sophomore biology students can handle photosynthesis questions generally reserved for advanced placement biology students.

In the spring of 2007, following a staff presentation on proficiency by Parsons and Steinke, Emily Anderson and Susie Erickson decided to adopt proficiency practice in math as a way to help almost half of incoming freshmen who were two years behind grade level in math proficiency.

Their plan was to get 63 math-deficient students through pre-algebra 1, pre-algebra 2, and algebra 1 in three trimesters. With a school stipend for summer planning, they launched their two-person team teaching program in the fall of 2007. By the spring trimester, its impact was striking. After a few weeks in the fall, half a dozen students were assessed proficient and moved on to algebra 1, which they all passed. By spring 2008, among the 55 students still enrolled in the proficiency classes, 52 were proficient in algebra 1 and ready to move to algebra 2 in the fall of 2008.

Over this period, the balance of the school's six math teachers converted to proficiency-based instruction. "They love it," Anderson said. "We all use the same grading scales so there'll be no confusion for kids as they move through different classes and teachers in the department." Other math teachers now have the students that Anderson and Erickson brought along so rapidly.

"We all use the same grading scales so there'll be no confusion for kids as they move through different classes and teachers in the department."

Proficiency-based classes at Scappoose are predominantly project based with a lot of formative assessment. Steinke said she uses lecture time now only to launch new lesson segments, where she briefs students on the academic standards they must achieve and the specific proficiencies they must be able to demonstrate to prove they have achieved those standards. Anderson said she and Erickson "try to use as many real life examples as possible, such as buying a car," to achieve such state standards as computing percentages with decimals. They introduced the use of Excel spreadsheets and developed a wiki format where students can work on math problems online – building on individual and group work with additions, deletions, and comments. The wiki has links to pages that help parents understand content standards, as well as links to sites with math videos, games, and practice problems.

Scappoose students in proficiency-based classes are accorded grades for their work, but those grades are based strictly on proficiencies assessed on a scale of 1 through 6 levels in most classes, and 1 through 10 in math. The upper third of those scales is considered proficient, but teachers say that students typically push themselves to the highest level of proficiency.

Scappoose teachers tend to talk about their proficiency-based efforts as "standards-based" since they place so much emphasis on starting with standards. Even before Scappoose teachers adopted proficiency-based practice, the school saw its 2004-05 student scores in reading, math, and science jump significantly after it aligned its curriculum to state content standards. Oregon's content standards form a baseline at the school, but Scappoose teachers use other standards, too. Steinke said she teaches all of her life science courses using Standards for Success (S4S) and industry standards from her college pre-med experience and her medical science background. She said the state standards are a useful guide in creating curriculum but she believes they would be more helpful if they were broken down into more specific behavioral objectives.

Proficiency-based practice is now in place at Scappoose in biology, anatomy, oceanography, ninth grade world history, pre-algebra, algebra, algebra II, and geometry. The English department is starting to move in that direction, and the high school continues to work with the Business Education Compact on teacher development in proficiency-based practice.

Beaverton wants to move all of its high schools to a proficiency-based system in the next 10 years.

Steinke and Anderson credit high school principal Sue Hays for her "amazing" support of proficiency-based practice. They said her first response was "If it's good for kids, let's do it." Scappoose, it should be noted, requires a minimum of 27 credit hours for a high school diploma, well above both current and new state diploma requirements.

Beaverton School District. Like Redmond and Scappoose, Beaverton illustrates how teachers and principals can take the initiative to develop a proficiency-based instructional program. However, Beaverton, which serves nearly 38,000 students from five comprehensive high schools, eight middle schools, 31 elementary buildings, and 22 option schools and programs, also illustrates how a *large* district can encourage and support a sustained bottom-up effort of this nature.

A small cadre of Beaverton teachers made their first foray into proficiency more than five years ago when a number of them became interested in its potential. According to Robin Kobrowski, an assistant principal who has been involved in supporting the district's proficiency development efforts, many of these teachers were Influenced by "Inside the Black Box,"[8] a 1998 essay by Paul Black and Dylan Wiliam on the power of classroom assessment. Their interest was cemented in 2003-04 when they attended a proficiency-based assessment workshop run by Rick Stiggins, whose ETS Assessment Training Institute is located in Portland. As noted earlier, Stiggins is a strong advocate for proficiency-based assessment, with particular focus on formative assessment as a driver of effective instruction and learning.

Kobrowski describes the Stiggins workshop as a turning point for Beaverton, which soon after hosted its own district workshop for teachers called the Balanced Assessment Project. That effort was led by Matt Coleman, then principal of Westview High School, who had done his doctorate studies and independent research on assessment. "He influenced us on the power of formative assessment," she said. "He convinced us that we needed a formative assessment driven system. In 2004-05 we did a lot of work in the district building assessment literacy." Coleman has since joined the Springfield School District as director of secondary education.

That early interest in proficiency by teachers and principals has found two bases of support in the district: the High School Enhancement Initiative and the Middle School Proficiency-Based Assessment Project. The High School Enhancement Initiative brings district-level support to teachers using proficiency-based assessment and instruction; it has focused the district on proficiency assessment as a priority endeavor. The high school group adopted as its paramount goal moving all of Beaverton's high schools to a

proficiency-based system in the next 10 years. Proficiency efforts are under way most prominently at Southridge and Westview among the bigger high schools and at two small learning communities, Health and Science High School and the Terra Nova High School (all described below).

Begun in spring 2007, the Middle School Proficiency-Based Assessment Project promotes common proficiency-based assessments focused on grade level learning targets in all content areas. Middle school principals have been the driving force behind the project to address concerns about rigor at the middle school level. In this model, progress on the learning targets is typically reported on a continuum from novice to expert. As part of the project, middle school teachers are working to build collections of evidence, draft sufficiency guidelines, and define proficiency criteria. Kobrowski describes the middle school effort as an important extension of formative assessment practices that are a fairly routine, natural approach at the elementary level.

Beaverton's proficiency efforts are teacher and principal led rather than district mandated, but the district supports these endeavors.

Kobrowski notes that Beaverton's proficiency efforts are teacher and principal led rather than district mandated. The district, however, supports these endeavors at the highest levels. District leadership, Kobrowski said, understands that real change happens with teachers, that they need support in the form of release time, and that the process takes patience. Both the high school and middle school initiatives are expected to go on for a number of years. The assessment initiatives, she added, go hand in hand with the district's commitment to professional learning communities.

To support its learning communities in developing proficiency initiatives and other programs, Beaverton is building a data warehouse that will be accessible to teachers and help them capture, analyze, and use data to improve teaching and assessment.

Southridge High School. Southridge, which opened in 1999, was designed as a high school made up of four small learning communities or houses with names like Discovery and Renaissance. Southridge became a district pioneer in proficiency-based practice after some of its teachers participated in the Stiggins workshops on assessment and the school became part of the state pilot program on credit for proficiency. The school was initially interested in awarding students credit for prior learning (in areas such as the arts, second language, and, in one case, biology content standards centered on a student's experience with chicken husbandry).

Given teacher interest in assessment of standards-based proficiencies, credit for proficiency at Southridge has evolved into classroom practice focused on proficiencies in core academic subjects and skill standards. Vice Principal Randy Dalton said that ten of the school's 90 teachers have moved completely away from subjective factors in grading and toward proficiencies based on learning targets. He said he expects this to grow as other teachers ground themselves in the philosophy of proficiency. Presently, more than half of the school's 2,000 students spend some part of their time in proficiency-based classes that are represented in all departments.

At present Southridge teachers are developing what they call common learning targets, the equivalent of power standards for key proficiencies. Dalton said this sets the stage for common assessments down the road developed through professional learning communities.

Westview High School. Proficiency-based practice is established and growing at Westview. In the school's mathematics program, 17 of 18 teachers use proficiency-based assessment and instruction, and other departments and teachers are taking steps to adopt proficiency practice. As evidence that proficiency-based practice is effective, Matt Coleman, former Westview principal, cites results the first year in which students took an algebra and geometry survey course in the proficiency-based model. Eighty percent passed proficiency scores at levels corresponding to 'A' through 'C.' In the prior year's class, taught with a traditional instruction model, only 40 percent reached that level of proficiency.

Health and Science High School. This school, a member of the Oregon Small Schools Initiative, was planned and launched as a proficiency-based program in the 2007-08 school year with a special focus on preparing students for health care and science careers. In its initial year the school had 116 ninth graders. In the following years it will gradually add grades from 6 to 12 until it reaches 750 students in 2110-11.

Principal Steve Day, who attended the initial Rick Stiggins workshops, started conceptual planning of Health and Science High School three years ago. With district approval, he and a team of 12 staff began operational planning in the summer of 2007.

Health and Science High School is designed around the Expeditionary Learning Schools format (http://www.elschools.org/). "Learning expeditions" are central to the ELS approach. Keyed to content and skill standards, learning expeditions engage students in long-term, cross-discipline research projects that culminate in media products and public presentations. In one such project, the school's ninth graders researched the great influenza pandemic of 1918-19, often called the Spanish Flu, which helped them understand the genetic, social, political, and human dimensions of the outbreak that killed between 50 and 100 million people worldwide. As a practical outcome of that research, the students produced a brochure explaining the importance of people getting flu shots. The ELS learning approach, said Day, is especially effective with students who have struggled in the past, but it makes learning engaging for all students.

In just the first trimester, 100 percent of the school's ninth graders were passing math, and 90 to 100 percent were passing all core subjects. Those results dropped slightly but held up generally well through the rest of the 2007-08 school. This was all the more remarkable among a population where half the students are on free or reduced lunch and 25 percent speak English as a second language.

Terra Nova High School. As noted above, Terra Nova is a Big Picture school modeled on The Met in Rhode Island. This Beaverton district high school was created in partnership with the Northwest Regional Education Service District. In 2007-08 the school had 60 students in grades 9 through 12, and it expects 80 students in the following year. The school describes itself as a personalized learning community emphasizing individual responsibility, academic rigor, and productive citizenship. Students do extensive, independent project-based work and are awarded credits based on proficiency in state and district content standards. Learning experiences include participation in classes at Terra Nova, on-line classes, community college classes, work/internship experiences, and in-depth, long-term projects. Internships and community service are particularly important at this school as learning experiences. Students spend two days per week working in internships with the guidance of certified teachers and community mentors.

Greater Albany Public Schools. The Albany district, which was part of the state's credit for proficiency pilot program, has proficiency-based classes available in both of its comprehensive high schools and its alternative school, which serves grades 6 through 12. Albany proficiency classes are generated by teachers and administrators in cases where a credit option appears to be needed. Students develop a collection of evidence to demonstrate proficiency in a particular content area.

Despite the use of proficiency-based assessment and instruction, Albany does not have a concerted district-wide commitment to adopt proficiency practice. Diane Smith, the district's director of curriculum and instruction, and a prominent workshop speaker on proficiency practice, cites a number of cultural barriers that teachers must navigate before they can embrace the practice. "Very few things come along that can change teacher practice like proficiency can," she said. "Very few things can improve a teacher's understanding of what it means to 'teach to standards' like this can."

"Very few things come along that can change teacher practice like proficiency can. Very few things can improve a teacher's understanding of what it means to 'teach to standards' like this can."

"Job security can be a concern," she said. "Teachers worry, for example, that if kids flood to teachers using the proficiency model, those who don't offer proficiency-style courses won't have students. Teachers don't have practice in articulating what proficiency means for their content area, and they frequently lack training. They

know that students don't learn at the same rate [fast enough] while the calendar is moving to a finish point, and they worry how to translate proficiency into grades." Other challenges include weaning teachers away from using subjective factors (attitude, effort, attendance, and behavior) in grading and onto content standards as a way to build learning activities and proficiency measures.

Gresham-Barlow School District. Gresham-Barlow, one of the original districts in the state's proficiency for credit pilot program, plans to expand into in-class proficiency practice in the 2008-09 school year. Beginning in the second semester, several proficiency-based pilot classes will be offered at both Gresham and Sam Barlow high schools in math and social studies. Over 1,300 students have earned proficiency-based credit for outside-the-class learning in the district. The two high schools still offer students a number of courses where they can earn credit this way, but the new pilot classes represent a move toward models similar to Redmond and Scappoose.

Oregon Districts Setting Their Sights on Proficiency-Based Education

Forest Grove School District. Forest Grove plans to implement proficiency-based practice at the beginning of the 2009-10 school year at its 1,900-student high school. It began to lay the groundwork in 2007 by aligning its grade 5 through 12 content standards and summative assessments. High school principal John O'Neill says that teachers are forming professional learning communities to indentify power standards and formative assessments, and he expects that every course on campus will be aligned to proficiencies by spring 2009. Forest Grove High School will still use grades but base them on proficiency assessments. O'Neill said Forest Grove teachers know that as a part of the transition to proficiency they will have to give up grading based on discipline or behavior. But he's confident "they'll go for it," he said, "We have a lot of student-centered teachers rather than teacher-centered teachers."

Forest Grove Principal John O'Neill is confident his teachers will embrace proficiency practice because "We have a lot of student-centered teachers rather than teacher-centered teachers."

Springfield School District. Springfield is taking the preliminary steps necessary to achieve a proficiency-based system in its middle and high schools. It is building a model of core standards and next it will create a matching framework for formative assessment. Matt Coleman, the district's new director of secondary programs, believes in a main tenet of standards-based instruction: that proficiency assessment, in particular formative assessment, drives curriculum and instruction. He helped frame that philosophy during his tenure in the Beaverton district where he was principal at Westview High School. At Springfield he envisions that every credit will be based on proficiency in the next two years. As a corollary effort, Springfield is laying the groundwork in its secondary schools for professional learning communities in which teachers can build, evaluate, and constantly improve proficiency-based curriculum, assessment, and instruction.

Springfield's Academy of Arts and Academics, an Oregon Small School Initiative site, currently has important elements of proficiency-based practice in place. Students are assessed on proficiencies at the 'A' or 'B' level and keep working until they achieve that level of competence. There are no grades of 'C,' 'D,' or 'F.' Students develop proficiencies through multiple learning activities, and learning time is open ended.

Factors Favorable to Proficiency Adoption

Besides the pioneering local efforts described above, Oregon has a number of things going for it in creating proficiency-based education. With the support of business groups, foundations, and other stakeholders, state education officials have long labored for comprehensive content and skill standards. Those standards, which form the platform for proficiency-based practice, are reflected in the new Oregon diploma requirements. The Department of Education staff has been a catalyst for proficiency practice and credit, most notably through statewide pilot projects it sponsored on student achievement issues from

2004 to 2007, on proficiency pilot projects it sponsored at various school sites from 2004 to 2006, and then through the recent Credit for Proficiency Task Force, which it organized as part of the new diploma process. The Business Education Compact has been tireless in advocating proficiency practice and in training educators statewide. From 2004 through 2008, the combination of the pilot projects, the task force, and BEC's work in teacher development had a central role in raising awareness of proficiency, bringing practitioners together, creating new practitioners and advocates, and building relationships.

Stature in the new Oregon diploma. Department of Education literature describing Oregon's new diploma requirements specifies that schools must provide students the option to earn credit by demonstrating proficiency. This raises the profile of proficiency-based credit as a factor in the new diploma requirements and gives it added importance, as suggested in the comments of some administrators interviewed for this paper.

The importance of proficiency was underscored in the policy statement that the Department staff was preparing (at the writing of this paper) to present to the State Board of Education in the fall of 2008. Based on input from the Credit for Proficiency Task Force process (see below), the Assumption section of that document makes it clear that the best way for Oregon to achieve a standards-based education system is for classroom instruction and assessment to be proficiency-based. The kernel of that draft, the Recommended Policy Statement, requires schools to offer proficiency credit "in lieu of, or in addition to traditional clock hours." It goes on to require 1) by the 2009-10 school year districts adopt policies and processes to do that, 2) by January 2012 they demonstrate progress in doing that, and 3) by June 2014 they can document they have done that.

The Assumptions section [of the state policy draft on proficiency-based credit] makes it clear that the best way for Oregon to achieve a standards-based education system is for classroom instruction and assessment to be proficiency-based.

After taking up the policy statement, according to staff, the board will consider revisions to the Oregon administrative rule that governs proficiency practice and credit. At this writing it was too early to know what changes might finally be adopted in the OAR, but ideas under contemplation included a more inclusive title, school latitude to apply proficiency credit to all courses, and application of proficiency credit to classes where hours of instruction may vary and may be equal to or be less than the state's standard 130 clock hours. The rule will almost certainly add language requiring that a student's demonstration of proficiency meet state, local, or national evidentiary criteria and an acknowledged range of standards. These would include state standards for subject matter content and essential skills, and probably industry-based knowledge and skills and other national or international standards. The latter, for example, might include standards defined by the College Board, by Standards for Success (S4S), and by International Baccalaureate.[*]

Credit for Proficiency Task Force. The proficiency task force was one of five the State Board of Education created to look at the challenges and requirements of implementing Oregon's new diploma requirements.[**] The proficiency task force, representing a variety of stakeholders and practitioners from secondary and postsecondary education, met five times over the winter and spring of 2008. Task force members expressed unanimous support for student demonstration of proficiency as a credit option, but their views differed on whether proficiency-based practice should be locally self-generating, state mandated, or some compromise between those two positions. Other points of agreement included a need

[*] The Oregon schools implementing proficiency-based instruction and assessment have been using the state content standards in most cases but adding elements of the College Board standards or others, such as S4S. One district is leaning toward adoption of updated standards from the original Proficiency-Based Admission Standards System (PASS). PASS standards represent college-ready proficiencies.

[**] The others were an advisory group focused on overarching implementation issues, one on standards and assessment, one on essential skills, and one on cost and capacity issues.

for consistent standards (across schools, across districts) to which proficiencies apply, common criteria for assessing proficiency, and adequate release time and funding for professional development and development of materials and rubrics. The task force was assigned a limited life by the board and held its last meeting in June 2008.

BEC's pioneering training and advocacy. The Business Education Compact has been one of the strongest and most effective proponents of proficiency-based education in Oregon. Between spring 2005 and spring 2008, BEC has conducted more than 170 proficiency workshops for 700 teachers and administrators in two-thirds of Oregon's counties. Most of these have been for school districts and educations service districts, but others have served personnel from the Oregon Department of Education, a community college, a private university, a charter school, and several education advocacy groups. Besides offering ongoing workshops, BEC has also made grants to schools to support the development of proficiency-based programs. One recipient was Gresham-Barlow High School, which has awarded over 1,000 elective credit hours for out-of-classroom learning activities. BEC initially focused on hands-on proficiency learning outside the classroom but now trains educators on credit recovery and on standards-based instruction and assessment for core subjects in the classroom. BEC advocates a state mandate for school districts to adopt proficiency-based education with timelines for implementation.

BEC advocates a state mandate for school districts to adopt proficiency-based education with timelines for implementation.

BEC has also formed a coalition of public and private universities, school districts, state education agencies and businesses to lead what is called the Collaborative Teacher Development Initiative. This is a five-year statewide project to create new models for teacher preparation and professional development that align with Oregon's plans for high school reform. The project has the support of the Teacher Standards and Practices Commission, the Oregon Department of Education, the Oregon Education Association, and the Confederation of Oregon School Administrators.

State-Level Challenges in Adopting and Sustaining Proficiency-Based Education

Oregon has 197 school districts, 235 high schools, and 225 middle schools. Only a handful of them have proficiency-based programs, and the initiative for building these programs has come primarily from teachers and principals at local levels taking advantage of the 2002 credit options rule. If state policymakers agree that proficiency-based classroom practice is the missing piece in transforming Oregon's secondary schools to a standards-based system, they must decide what role the state can and should play in statewide adoption of this approach.

Deciding how assertive to be in closing the gap on standards-based education. From the standpoint of treating proficiency as a *credit option*, the state's role to date has been low key. In adopting the 2002 credit options rule, the state created the opening for proficiency advocates, and its 2004-05 pilot program in credit for proficiency it helped a number of high schools prove the concept. As noted above, it has also brought together people and ideas that have fueled interest and growth in proficiency. Despite these contributions, many proficiency advocates fear that if the state doesn't do more to influence adoption of proficiency-based practice, Oregon will have a standards-based system in name only and in only a portion of its districts. On the other hand, some say, a top-down mandate, especially without adequate resource and capacity support, could create a backlash.

Many proficiency advocates fear that if the state doesn't do more to influence adoption of proficiency-based practice, Oregon will have a standards-based system in name only and only in a portion of its districts.

Conversations with proficiency proponents suggest there are two middle paths that policymakers might consider. The first path, which is less assertive, would involve either or both of two directives designed to offer students school-level choices in proficiency-based classes: 1) require high schools, and perhaps

middle schools, at some defined date to guarantee every student the opportunity to earn a certain number of credits – or credits in a specified set of subjects – by proficiency; 2) require schools to offer a proficiency-based option in at least one class in any subject where more than one class section is available. In the latter instance, students could vote on the proficiency approach with their feet. (On a larger scale, employing the same market principal, Oregon could adopt a policy that makes school district boundaries permeable for students who want access to a proficiency-based education. Districts are obsessed with capture rates tied to budget allocations for enrollment, and they provide services to students only within their geographic boundaries. Now the only way a student can realistically attend a school outside his or her attendance area (except for charter and virtual schools) is to pay tuition out of pocket. Technically a student could seek an inter-district transfer agreement, but it isn't likely that a district would relinquish funding for a student to another district. If money truly followed students, districts would have to compete for these students on the strength of their programs and the kind of learning process and outcomes that would be enhanced by large-scale conversion to proficiency-based instruction.)

The second, more assertive path would be to mandate proficiency-based *assessment* (but not necessarily instruction) for all content classes according to proficiencies defined in content standards. Because assessment based on standards tends to drive and define instruction, such a mandate would lead to proficiency-based instruction. It might be argued that this bumps up against a provision in ORS 329.045 (Oregon's policy to achieve rigorous academic content standards) that allows school districts and public charter schools the latitude to "maintain control over course content, format, materials, and teaching methods." However, Oregon's content standards already exert substantial influence over K-12 curriculum, and the new diploma requirements further open the door by mandating proficiency-based assessment of essential skills.

Preparing educators for proficiency-based practice. Oregon's schools of education, both public and private, as well as private and nonprofit teacher development programs, would be strained if they were called on to meet significant, rapid growth in school district demand for personnel skilled in proficiency-based practice. Demand would occur in four categories: in-service teacher training, teacher preparation, administrator training, and practicum settings. The Business Education Compact and private consultants are providing advocacy and leadership on proficiency while meeting limited in-service demand for teachers and administrators. What they are doing is valuable and could probably be scaled up to a higher level, but not enough to address system-wide conversion to proficiency. That, more than likely, would call for more capacity and expertise on proficiency in our schools of education.

Right now, it would be difficult to find new teachers and administrators with pre-service schooling in proficiency-based assessment and instruction. That's because Oregon's schools of education are not turning them out, according to high school practitioners interviewed for this paper. The leader of one teacher education program, who supports proficiency-based practice, said teacher educators often don't pay enough attention to what is happening in classrooms or to what leading practitioners are doing. Another teacher educator expressed the same sentiment. As for practicum settings, there are very few right now where student teachers and interns can gain hands-on experience in proficiency-based practice.

Rick Stiggins, who trains educators worldwide in proficiency-based assessment, underscores the importance of both teachers and building leaders with a deep understanding of proficiency assessment. "Pre-service teacher preparation programs typically don't include assessment training and when they do, it often focuses only on accountability testing," he said. "And administrator pre-service programs typically don't include anything at all." He takes the position that effective instructional leadership requires assessment leadership. "The well-prepared principal is ready to assure that assessments are of high quality and are used effectively. Yet, historically, preparation for productive assessment has been missing from principal training programs."

School- and District-Level Challenges in Adopting and Sustaining Proficiency-Based Education

In adopting a proficiency-based system, local proponents must navigate a number of cultural, organizational, and technical issues. The organizational and technical issues are not insignificant, but cultural hurdles can be the most challenging.

The staying power of time-based learning and subjective grading. Nearly the entire education establishment in Oregon, as elsewhere, is built around a time-based, batch-process approach to learning and a grading system influenced by a range of subjective factors that often have little or nothing to do with a student's acquisition of knowledge and skills. Even though these practices do not serve enough students responsibly, they are firmly rooted in the education culture, often because they serve the needs and convenience of adults in the system. Adults who are adept at rationalizing this disparity will not change easily. Seeing the inadequacies of these practices and replacing them with better approaches will require a great deal of what one proficiency advocate calls "unlearning," and a difficult shift in perspective and expectations by institutions, teachers, and parents.

Time based learning and subjective grading practices are firmly rooted in the education culture, often because they serve the needs and convenience of adults in the system.

The inertia to be overcome to win stakeholder support has a range of cultural roots. For example:

- As noted by the participants of Uncommon Discourse, the idea that public education is a sorting process among students assumed to have different learning aptitudes is badly outdated, unfair, and economically counterproductive yet still imbedded in some parts of our general culture. It may be most persistent among parents who succeeded themselves in that competitive paradigm and whose children are equally adept in navigating the current system of "getting good grades," even if such grades may indicate capabilities that students don't possess. Proficiency proponents will have to make the case to those wedded to the prevailing grading system that it frequently cheats students who get good grades as much as it does students who struggle.
- Parents, administrators, and teachers are all invested in time-based education, from the school calendar to the daily schedule. From the perspective of student learning, it may take some effort for them to see the limitations of a time-based system and the higher return of a proficiency-based system.
- The prerogative to assign grades as they see fit is deeply held among teachers, so much so that some collective bargaining contracts forbid teacher supervisors from altering an assigned grade under any circumstances, or only in exceptional cases. At the same time, grading practice in Oregon schools is rife with subjective factors that have nothing to do with student acquisition of knowledge and skills. Proficiency advocates say teachers should understand that they can retain the authority to determine student grades in a standards-based system, but as indicators of proficiency, not as instruments of reward, punishment, and control.
- Some teachers fear that they will have to adopt proficiency-based practice without adequate grounding and with unrealistic expectations for rapid student improvement. Programs that have succeeded so far have not put teachers in that bind; districts that adopt proficiency-based programs will have to avoid that pitfall.
- The top down, politically contentious, and muddied experience with CIM and CAM implementation has left segments of the public and some educators suspicious of education reform in Oregon. Even though proficiency-based education seems to have its strongest advocates at the local level among teachers and principals, there are likely to be skeptics who see it as yet another reform that is confusing, experimental, or too complicated.

Technical Challenges

Developing the wherewithal to support proficiency-based practice. Implementation at the local level will take vision, program leadership and top district leadership support, a game plan, capacity, resources, and patience, which are all attributes and assets necessary to turn any organization in a new direction. Judging from the experience of schools and districts that have begun proficiency-based programs, it doesn't appear that a lot of extra money is needed beyond existing professional development funds. It just has to be focused.

Training and hiring a cadre of teachers who buy into the proficiency-based approach. From a local perspective, this is the flip side of the state's capacity limitations in teacher education and in-service training. Until teacher education institutions perceive local market demand, they are unlikely to adapt their programs in order to supply large numbers of teacher candidates ready for proficiency practice. Local districts probably would have to bridge this gap in the interim by using internal mentors and trainers, and by engaging private or nonprofit organizations that provide such service.

Whether to standardize standards. As noted earlier, Oregon schools can draw from a range of content and skill standards as a foundation for proficiency-based curriculum, assessment, and instruction. While most proficiency practitioners base much of their instruction on state standards, some also incorporate PASS, postsecondary, and industry standards. Some schools are also developing "power" or gateway standards – those which serve as keys or prerequisite for acquisition of other standards. This proliferation of standards has some proficiency advocates concerned that proficiency-based instruction, assessment, and assigned grades based on that assessment will begin to vary too much from school to school and district to district. The Credit for Proficiency Task Force, in fact, cited a need for consistent standards across schools and districts for that reason. On the other hand, some advocates worry that too much uniformity in standards across schools will stifle the judgment and initiative of local professionals. As proficiency-based practice grows, Oregon educators will have to address that tension.

***Developing a sufficient body of rubrics to assess student proficiency*.** A rubric is a scoring guide that describes criteria for student performance and differentiates among different levels of performance within those criteria. Because rubrics set forth specific criteria, define precise requirements for meeting those criteria, and often assign numerical scores to each level of performance, they provide teachers with an effective, objective method for assessing student proficiencies that do not generally lend themselves to objective assessment methods. Rubrics also provide students with standards and expectations they can use to evaluate their performance while completing assignments.

Developing proficiency materials, especially classroom-level rubrics for scoring student work is a very large undertaking requiring training and release time for teachers, both of which require organizational encouragement and funding.

As noted earlier, Michael Bremont of Redmond estimates that between existing state rubrics and what has been developed in the field, no more than 10 percent of needed rubrics have been developed in Oregon. That would mean 90 percent of what is needed has not been developed, and, beyond that, new rubrics must be constantly developed as content and teacher material evolve. Rubrics are usually most effective when developed by teachers, and they take time to develop. Developing proficiency materials, especially classroom-level rubrics for scoring student work is a very large undertaking requiring training and release time for teachers, both of which require organizational encouragement and funding.

Expressing proficiency in the form of conventional grades. Even where students are assessed strictly on their proficiency levels in given knowledge and skill standards, other parts of the secondary and postsecondary education system still think in – and require – grades. So, all proficiency-based programs must have a method of expressing assessed proficiencies in terms of grades. For example, Beaverton's Health and Science High School and Scappoose High School score student proficiencies on numerical scales that are then translated into letter grades. Southridge and Redmond high schools, on the other hand,

base grades directly on proficiency. In either system, students at the highest two levels typically are deemed proficient. Students at the higher of the two levels are sometimes viewed as advanced. Students below the proficiency level have to keep working until they are assessed as proficient.

New software products have come onto the market that make it easier for teachers to assess and grade students, and to report and analyze student performance data. One of the most prominent of these, which incorporates proficiency-based assessment, benefits from the expertise and collaboration of Robert Marzano.

Working within the confines of a time-based system. In an ideal proficiency-based system, students who learn faster than their peers are not held back, and students who learn slower are not abandoned or rushed to meet the conclusion of the academic calendar. But in the context of a time-based system, proficiency programs are forced to make some compromises. In some of Oregon's proficiency programs, quick learners are steered into advanced proficiency studies or asked to mentor struggling students. Struggling students or students who have not been sufficiently diligent, are sometimes steered into intensive catch-up mentoring or after hours study as the school schedule draws to a close.

Collecting data to evaluate and improve proficiency-based practice. In daily and weekly classroom practice, and even in curriculum planning and development, teachers meeting informally or even more formally through professional learning community teams offer school districts a reliable way to collect and evaluate data and improve proficiency-based practice. However, it is useful for school districts to collect and analyze student performance data over a longer period of time – including follow-up results in postsecondary education – that can be used to evaluate and improve curriculum and instructional practice. Some school districts are creating what they call "data warehouses" for this purpose. Some of it can be generated though report card software, some cannot. The Oregon Data Project is making progress in developing a uniform class- and school-level data system that will enable student information to be uploaded securely to regional data warehouses, and from there to a state level data warehouse for analysis stripped of specific student names. Full operation of this system will be welcome. Redmond High School developed such data in building its proficiency-based program, but did so through personal interviews and through manual collection and tabulation of print records, a time-consuming process that would have been greatly aided by automated data collection and processing.

SMALL LEARNING COMMUNITIES

As dissatisfaction has grown with the effectiveness of comprehensive high schools, small learning communities have taken root within the past two decades as a popular model for reform.* They typically break all or a portion of a large school population into groupings that are often called houses, neighborhoods, schools within a school, or academies. They usually have 400 or fewer students and varying structures and levels of autonomy in administration, funding, hiring, and curriculum. The idea behind this arrangement is to keep students from becoming lost or disengaged in the impersonal setting of a large school and to improve their prospects for academic success. Small learning communities often offer students a closer connection to caring, supportive adults and more intensive instruction relevant to student interests. Small learning communities are sometimes built around particular career or academic themes, such as the arts, business technology, or health and sciences. Some of them are built around age groupings, such as freshman or sophomore academies.**

Small learning communities have not come into being without debate. For all the research and arguments in their favor over several decades,[9] including the case that they can be just as cost effective as larger schools, defenders of the comprehensive high school have argued that small schools lack the academic breadth and range of activities that students need and that will help keep them in school. However, as the average size of public high schools increased in the 1960s and beyond, reform advocates stepped up their support for smaller schools, even if they had to be carved out of bigger ones, which has more often than not been the case. A watershed event in history of this advocacy was the 1996 publication of *Breaking Ranks: Changing an American Institution.*[10] There the National Association of Secondary School Principals made personalization of high schools the first in a list of sweeping recommendations.

Perhaps Oregon's best known small learning communities are those in the Oregon Small Schools Initiative. However, nearly as many Oregon high schools have created smaller student groupings through federal Smaller Learning Community grants. Few Oregon high schools have formed small learning communities without grant funding. Charter schools with focused missions have also emerged as small-school alternatives to large public schools. Some of these are focused on proficiency-based education and some are in the Small Schools Initiative.

Small Schools Initiative

The Oregon Small Schools Initiative has been making grants since 2004 to help large high schools organize or reorganize as small schools-within-a-school, in some cases in the form of academies focused on career or academic themes. The Initiative began in April 2003 with a joint grant of $25 million from the Bill & Melinda Gates Foundation and the Meyer Memorial Trust to E3, Employers for Education Excellence. Initiative grants have supported reorganization of existing schools, planning of new schools, program coaching, professional development, and assistance with curriculum and instruction. The Initiative built into each grant a number of criteria to measure success, including student achievement,

---

* Small schools have long been around in the form of private schools or small public schools in rural communities, but rarely in public schools in larger cities and towns. Since the early part of the 20th Century, American secondary education has been dominated by comprehensive public high schools. The thinking of the times favored the larger format as a way to offer a broad menu of instructional options, to serve the divergent needs of students assumed to be bound for different occupational roles and strata, to create a common and democratizing social experience for students from different backgrounds, and to achieve economies of scale. Both the validity and the wisdom of these assumptions have come under increasing challenge, in particular as population growth and school consolidation over the past half century have produced bigger and bigger schools that are unsuccessful with large segments of their students.

** As a side note, these recent small learning communities are not the first to try this concept in Oregon. In 1970 Adams High School in the Portland School District opened as a set of schools within schools and operated until 1981. The federally funded experimental school was based on the "open classroom" model that mixed students by age and skill level, featured interdisciplinary team teaching, and focused more on student interests, contemporary issues, and learning how to learn, than on a defined curriculum. The unstructured environment was unsuccessful with a significant share of students and was critically derided by many teachers and community members. With the demise of federal funding and with declining enrollment, the building was converted to a middle school and later abandoned and demolished following a mold infestation.

college readiness, attendance and graduation rates, and the number of students who go on to higher education.

Altogether, the Initiative has supported the creation of 38 small schools in 12 districts throughout Oregon. These included 32 conversions of existing high schools into smaller units, and six new schools. By the beginning of fall 2008, 31 of these schools were still under Initiative support. Among the other seven, most of which have finished their funding period, some schools are continuing in the small format on their own, and several have either abandoned the program or operated a modified version.

Generally mixed success. Many of the Initiative's schools are achieving success with students, but there have been some disappointments, too. Generally, Initiative schools over the past three years have recorded achievement gains higher than statewide averages (which have been flat or declining) and better than comparable-school averages* in state grade 10 math, reading, and writing assessments. On the other hand, while overall small school achievement is better than comparable schools, it falls below state averages. (See table below.)

Average of Oregon 10th Graders Meeting or Exceeding State Standards in OAKS Assessments

	Math Results				Reading Results				Writing Results			
	2005-06	2006-07	2007-08	Δ over 3 Years	2005-06	2006-07	2007-08	Δ over 3 Years	2005-06	2006-07	2007-08	Δ over 3 Years
Small School Avg.	40.5%	44.1%	43.0%	2.6%	52.0%	54.4%	58.0%	6.0%	40.8%	42.8%	47.3%	6.6%
State Avg.	55.0%	55.0%	52.0%	-3.0%	65.0%	65.0%	65.0%	0.0%	55.1%	54.0%	54.0%	-1.1%
Comparison School Avg.	48.7%	51.2%	47.6%	-1.2%	59.3%	57.6%	57.2%	-2.1%	49.7%	44.9%	49.5%	-0.2%

Source: Oregon Department of Education

Similar results are evident even in Portland small schools serving student populations with the most challenging demographic and family financial profile. Small schools on the Roosevelt and Marshall high school campuses, for example, show stronger achievement gains than both comparison schools and other Portland high schools, and they show higher overall achievement than comparison schools – but lower overall achievement than other Portland high schools. Unfortunately, they also lag other metro schools as well as state averages in attendance and high school graduation rates.

Success stories. Countering these Portland metro data on attendance, achievement, and attainment, the Initiative can point to impressive successes at sites elsewhere in Oregon. These include 1) both achievement scores and gains at South Medford's small schools exceeding state averages, 2) greatly improved attendance and persistence at Woodburn's two academies, 3) significant achievement gains among the four schools at Crater, and 4) strong student performance, as discussed earlier, at the Beaverton district's Health and Science High School. Even at small schools where student gains exceed state averages but performance doesn't, the gains give Initiative officials cause to be hopeful because they see many students who have not been successful who are now heading in the right direction.

Even at small schools where student gains exceed state averages but performance doesn't, the gains give Initiative officials cause to be hopeful because they see many students who have not been sufficiently successful heading in the right direction.

Oregon's experience compared to other Small School sites. Such results reflect similar experience in the other states and localities where over $1 billion in Gates grants have created small schools. By and large, according to evaluations that the foundation commissioned for all of its small school grants from 2001 to 2005, newly minted small schools had higher attendance rates and better 9th-to-10th-grade progression

* Comparable schools are those with similar student demographics and share of students on free and reduced lunch.

rates than comparable schools in the same district, but not so the redesigned or converted schools. Achievement test scores in both kinds of small schools were generally below district averages.[11]

The higher success of new schools appears to be a product of staff and student self-selection for the small school experience. Just as the Initiative has found with its brand new small schools in Oregon, the Gates evaluations found that the foundation's new schools nationally had the advantage of staff and students who buy into the school and mission from the beginning. "It takes longer to redesign and change the culture of a high school than to start a new one," the evaluators concluded.[12]

Prying beneath the results, one evaluation for the foundation cited the difficulty of getting to instructional improvement soon enough in the conversion of existing large high schools, due mainly to the time and energy consumed on structural and organizational issues. A study of Gates-supported conversion to small schools in Chicago illustrates how successful small school conversions can be when the right professional ingredients and dynamics are in place. In looking at the highest achieving small schools in the Chicago High School Redesign Initiative, the Consortium on Chicago School Research found several common features: "strong teacher professional communities, deep principal leadership, and a strong teacher influence" as well as a personalized and supportive environment for students.[13] This is how the study summarized the relationship of these factors and their collective effect:

How adults work together in small schools is a crucial factor in raising student achievement.

> Teacher professional communities that engage in collective work on academic improvement are supported by strong leadership in schools. Involved principal leadership is important for organizing and sustaining collective work, while teacher influence helps make it more relevant for schools' staff. Both of these supporting conditions are necessary to make collective work more meaningful.
>
> This work highlights that how adults work together in small schools is a crucial factor in raising student achievement. In particular, it suggests that collective work on improving instruction is a key lever for raising achievement. In addition, it points to the benefits of balancing the direction and initiative provided by principals with teacher voice and leadership. Given that reducing size does not automatically lead to such developments, however, schools will need to intentionally focus on creating these key organizational characteristics.

The foundation appears to be shifting its focus, accordingly, in this direction, and it's placing more emphasis on starting new schools than on converting existing ones. In a June 8 story in *The Oregonian*, Vicki Phillips, who directs the Gates education initiatives said, "We have learned that small by itself is not enough. Good curriculum and instruction don't just show up…"[14]

Initiative is adapting in Oregon schools. The Oregon Small Schools Initiative is adapting to this shift in emphasis. In its initial years the Initiative was focused on developing the autonomy and structure necessary to instill learning enhanced by rigorous standards, practical relevance, and the close, nurturing relationships of a small community. In an effort that began during the last academic year, the program is now shifting into a more holistic instructional model with more focus on research-based strategies such as project based learning, best practices in mathematics, literacy in the context of social justice, and education equity. In support of that shift, the program has a stronger instructional coaching focus and is tripling its technical assistance workshops on instruction. It is partnering with the Center for Educational Leadership at the University of Washington to provide additional training and support on instructional coaching to E3 staff. It is also investigating how it can instill proficiency-based practice at more of its small schools, building on the success with proficiency-based practice at its Health and Science High School in Beaverton and the Academy of Arts and Academics in Springfield.

Data collection and analysis aid the effort. One of the strengths of the Oregon Small Schools Initiative is its commitment to continuous data collection and analysis, which is a staffed responsibility. This enables

the program to monitor what works (in the way of curriculum, instruction, and ancillary support), what doesn't, and what adjustments to make in conjunction with its partnering small schools.

Initiative prospects going forward. Thirty-one schools have Initiative funding support for two more years. Initiative officials are confident in that span of time that they can significantly raise graduation rates and student achievement on state 10th grade assessments in math, reading, and writing. Based on what schools are telling them, the Initiative also expects 90 percent of the small schools it has supported to continue on their own in the small school format after their funding period is over.

Smaller Learning Communities Grant Recipients

Since 2000 the federal government has promoted small learning community demonstrations in most states at nearly 1,400 high schools.[15] The Smaller Learning Communities program awards discretionary grants of up to five years ranging from under $1 million up to $5 million to local school districts to set up small learning communities in large public high schools with enrollments of 1,000 or more students.

Between 2000 and 2007 the federal program has made grants or re-grants to 32 high schools in 17 Oregon districts, including a few that have also received funding under the Oregon Small Schools Initiative. As the dual funding for some schools suggests, there are a number of format similarities between small learning communities supported by federal funding and by the Initiative. Both support schools within a school, including career academy variations, and small magnet programs. The federal program, however, seems to offer schools a more flexible, cafeteria approach to small learning community structures, including age-group academies (especially freshman academies), freshman or sophomore "clusters," "house plans" which anchor students in groups but still allow them access to other school offerings, and career pathway groups. SLCs are often enriched by such practices as interdisciplinary block scheduling of 80 to 90 minutes, team teaching, casting teachers in student advisory roles, family advocacy and support, student mentoring, and a focus on career pathways.

The federal Smaller Learning Communities program seems to offer schools a more flexible, cafeteria approach to small learning community structures.

This flexibility in the federal program has allowed high schools to adapt small learning communities to their unique circumstances and purposes. For example, at Westview High School, which is divided into three houses – blue, red, and silver – teachers and other building professionals in each house are organized into small groups, each responsible for about 60 students. "This was a way to organize professional learning communities," said former principal Matt Coleman. "The idea was to put teachers together with a counselor, campus manager, and administrator as a way to hard wire them to support the kids. That way you have five or six adults really dialed into individual kids."

Forest Grove High School illustrates the use of freshman and sophomore "houses" to improve student retention and academic performance. In 2001-02, when Forest Grove broke its freshman and sophomore classes each into five houses of about 100 students, the school's total dropout rate was running 7.7 percent and half of that was made up of ninth graders, many of them struggling academically. Within five years, according to principal John O'Neill, Forest Grove had cut its ninth grade dropout rate to nearly zero. As student achievement steadily increased, said O'Neill, the district responded with additional FTE allocations to establish a sixth team at both the 9th and 10th grade levels to bring the average number of students served on a given team down to 75. "In our case," he said, success has definitely bred success and greater levels of support for our school improvement endeavors."

Forest Grove's small learning community format has been partially responsible for dramatic improvement in the success of 9th graders, but so has the intensive academic program.

The close support of the small learning community format is partially responsible for this success, but so is the intensive academic program. Forest Grove runs summer math, reading, and writing workshops for incoming ninth graders, and then it gives them double block classes in these subjects the first year. After students finish the 9th and 10th grade at Forest Grove, they are better prepared to branch off into the six career pathways available at the junior and senior levels, where they can also earn dual credits with Portland Community College, as well as Advanced Placement credits.

A 2008 U.S. Department of Education evaluation of the Smaller Learning Community grants found results similar to the broader Gates Foundation small schools program.[16] After SLC funding, academic improvement, as measured on statewide assessments or college entrance exams, was either modest or neutral, with substantial variation from school to school. In a before- and after-funding comparison, there was some improvement in student promotion, participation in extracurricular activities, and reduction in the level of school violence. Unlike the Oregon Small Schools Initiative, it doesn't appear that there is any comparable ongoing, uniform data collection and analysis focused specifically on the performance and outcomes among the federally funded small learning communities.

Sustainability of SLCs. The 2008 evaluation also found that recipients of Smaller Learning Community grants are seriously committed to the small school format and its approach. Close to three-quarters of those schools reported that they expect to sustain those changes after their grants end. More than 90 percent, for example, said they are committed to keeping the rigorous core curriculum they have developed, and keeping more varied student assessments for grading and promotion. Although schools were less likely to report classroom-level changes with the federal SLC funding, the evaluation found, at least 80 percent of the schools that had implemented classroom-level changes also reported that they would sustain them. One exception is reduced class size, a change that may not be within the power of the school to sustain.

Favorable Factors in Creating and Sustaining Small Learning Communities

A rich store of literature, demonstration models, and experience. Even before the Gates Foundation and the federal government created so many demonstration sites, there was already a substantial body of literature on small learning communities, as well as a scattering of locally created models around the country. The sponsored sites and the studies of their successes and failures have enriched the literature, providing guidance both for existing and future small learning communities. Oregon's sites add to that body of knowledge.

Positive regard. By and large, small learning communities in Oregon high schools, whether foundation or government supported, have had positive results and have created an atmosphere of acceptance beneficial to others who might launch similar efforts.

Experienced personnel. Personnel from the staff of the Oregon Small Schools Initiative and recipients of Initiative and federal Smaller Learning Community grants form a pool of experienced talent that can be tapped in planning, staffing, and supporting additional small learning communities.

Challenges of Creating and Sustaining Small Learning Communities

The challenges of creating small learning communities in large high schools depends to some extent on whether a school intends to structure itself fully or partially in small groupings. An in-building freshman academy, a house plan, or a small off-site magnet program, appears to be less difficult to create than a full set of schools within a school building.

In the case of the latter, the experience of the Gates-funded small school initiative suggests that school districts have greater prospects of success in starting small learning communities at new schools than they do in converting existing comprehensive high schools. In fast-growing school districts, construction of new high schools presents that option, but for the most part, increasing the prevalence of small learning communities will require conversion of existing schools.

Leading the Conversion Process,[17] a study the Gates Foundation commissioned on the experience of its small schools, pinpoints the key lessons school districts must heed in fully converting high schools. Fouts & Associates, which conducted the study, also drew on its experience working with recipients of federal Smaller Learning Communities grants. Here is a condensed version of those challenges. A link to the report is provided in the endnotes to this paper.

Sponsors of a school conversion must establish a "moral imperative" to undertake a new approach and build a leadership team to guide that effort. It is useful to generate data which illustrate the gap between aspirations for students and actual outcomes and to keep that message in front of stakeholders to continually reinforce the imperative for the conversion. Teachers must agree that such outcomes are not acceptable, that all students can learn and can meet high standards. If educators in the building are complacent about failure rates, about education equity, and about the potential and aspirations of all students, conversion to small learning communities and their philosophy will not go smoothly or may even be subverted. Conversion requires building and district leaders who are aware of the human dynamics, who see themselves as change agents, and who step forward and work well together to accomplish the transformation.

If educators in the building are complacent about failure rates, about education equity, and about the potential and aspirations of all students, conversion to small learning communities and their philosophy will not go smoothly or may even be subverted.

Supporters must realize that the small learning community structure is a means to an end, not the end in itself. Structurally organizing small learning communities is an important process, but only to enable a more personalized learning experience for students, improved relationships between students and teachers, and better instruction. What happens within the structure to support student progress is more meaningful than the structure itself.

Teachers in particular must buy into the changes in teaching methods and environment required of small learning communities. Teaching is different in small learning communities. It is highly collaborative. It requires stronger relationships with students. It requires more academic rigor and the belief that all students can achieve at higher standards. Those leading the conversion must realize how much of a change this represents to teachers and put development and coaching programs in place to help them with the transition.

To succeed at high school conversions, districts must be committed for the long haul and all stakeholders must be on board, the community as much as teachers. The community has the potential to undermine a conversion if it does not understand and support the need for the change. Community awareness and understanding builds the political capital needed to negotiate changes in traditional programs such as sports, music, and other offerings in order to create small schools.

Schools must choose among options in program implementation and program design. Schools can convert gradually or all at once. Gradual conversion usually involves a phase-in by grade levels or by school creation one or two at a time over several years, which has the advantage of allowing program adjustment and staff development over the longer ramp up. The disadvantage is that this approach fails to get everyone on board and fully committed at the same time and involves an awkward transition period operating in two dissonant formats. Full implementation has the advantage of involving everyone in the change and is logistically cleaner than the phase-in approach, but requires more planning and can encounter stiffer opposition from students in the last two years, especially those who face the loss of particular electives or elite track courses such as Advanced Placement, which are often sacrificed in the small school format.

Small learning communities in conversion schools generally organize around thematic or general formats. Thematic formats are tied to career or subject matter themes, such as science and technology, or the arts, even though they still offer core curriculum. General formats focus on core subjects with some electives. Thematic programs create opportunities to partner with employers and community groups, giving

students real world learning experiences, but they are sometimes harder to implement, and therefore require more careful planning. The general format may not be as exciting to some students, but is easier to create and sustain.

In schools with a long history of elite track programs such as Advanced Placement and International Baccalaureate, Gates-funded conversions have not been welcomed by many parents and teachers unwilling to give up these programs in favor of a small learning community philosophy that all student can and should achieve high standards. Few, if any, of these schools have been able to successfully do conversions. (There are exceptions in Oregon to these findings. At International High School, an Oregon Small Schools Initiative conversion school on the North Eugene High School campus, students of all abilities take at least one International Baccalaureate course; and the school has piloted an Advanced Placement literature class. Federally funded small learning communities in Oregon appear to be compatible with elite track curriculum. Southridge High School, for example, has robust AP and IB programs.)

CONCURRENT CREDIT PROGRAMS

Concurrent credit programs* are one of Oregon's most effective means of helping high school students get a head start on postsecondary study. They offer simultaneous high school and postsecondary credit by prearrangement between institutions at the two levels. In these programs, high school juniors and seniors take actual college courses from a community college or college syllabus, either on the high school campus, the college campus, or both. They earn credits toward their high school diploma while earning credit for lower division college or career technical courses – or *both* lower division and technical courses. Some high school students earn enough credits by the time they graduate to satisfy all or most of their first-year college requirements, and sometimes more.**

Advantages

Apart from the early start on postsecondary credentials, enrollment in concurrent credit engages high school juniors and seniors in more rigorous study while easing the transition from high school to the next level. In particular, they give students from families without a college-going history the confidence that they can do college work. The advance credits students earn while in high school usually cost less than the same courses taken by first- or second-year college students and save them additional money by shortening their time in reaching their postsecondary goals. For the many high school students who attend an Oregon community college or state university, concurrent credit programs reduce public tax expenditures by lowering demand on remedial instruction. These programs are also a partial cure for what many educators call the wasted senior year, in which many students – with minimal high school credits in hand – coast to the finish line.

Despite the advantages of concurrent credit programs, only a quarter of the state's 11th and 12th grade students are involved in them.

Despite these advantages, roughly only a quarter of the state's 11th and 12th grade students are involved in concurrent credit programs, raising questions about why they haven't been taken to greater scale, and what the challenges might be in doing so. Oregon's Unified Education Enterprise group itself decided to address that question when it formed the Dual Credit Task Force in the spring of 2007. As its name suggests, the task force has looked primarily at one form of concurrent credit – dual credit – to study how Oregon students and the state are benefitting from dual credit arrangements and how dual credit offerings might be improved or expanded to include more high school students. The task force has met a number of times, produced a study of dual credit effectiveness, and concluded "that although the current dual credit programs are good, their potential for the state of Oregon has not been fully realized." In recognition that "these programs ought to contribute measurably to meeting the goals of 40-40-20," the task force wrote a

---

* As used here, *concurrent credit* means all programs in which high school students earn both postsecondary credits and high school credits simultaneously, whether the postsecondary credits are in lower division academic subjects or career technical courses, whether they are taught on the high school campus or the college campus. There are several other popular generic terms for the concurrent credit concept. These include *dual credit*, *credit-based transition*, or *accelerated credit*. Dual credit is actually a particular type of concurrent credit, as will be explained below in this paper. There is also *dual enrollment* although that term, in Oregon, appears to be more applicable to postsecondary degree partnerships in which students taking particular community college courses are granted credit concurrently at state universities. One further complication here is that some of the high school-postsecondary partnerships have created branded versions of concurrent credit, such as *College Now*, *College Credit Now*, *Advanced College Credit*, *Advanced Learning Options*, and *Challenge Program*.

** Concurrent credit programs, it should be noted, are different than Advanced Placement and International Baccalaureate programs. AP and IB, both excellent accelerated study options for students, are fundamentally different than programs that offer simultaneous credit as a *transition* to college, and thus not a focus of this paper. AP and IB provide students rigorous courses of study culminating in exams that measure mastery of the material. Depending on student performance in those exams, institutions at the next level then have the option to award college-level credits, and many do. According to the Oregon University System, more than half of Oregon high schools offer AP courses; the College Board reports that over 8,500 Oregon students took AP exams in 2006. Thirteen Oregon high schools offer IB programs. Oregon State University grants sophomore status and a $2,000 yearly scholarship to students who complete an IB Diploma at a high performance level.

policy option package, which the UEE has endorsed and forwarded to the Joint Boards of Education for inclusion in the 2009-11 budget request. Recommendations in the package call for continued policy support of dual credit, adoption of uniform standards across programs in the state, continuation of dual credit outcome studies, and expansion of the pool of teachers qualified to teach dual credit courses in high schools.[18]

Programs in Place

The most current data from the Oregon Department of Education show an unduplicated head count of 19,417 students, nearly all of them juniors and seniors, receiving more than 148,000 concurrent credits from high schools and community colleges during the 2006-07 school year. The Oregon University System reports 2,760 high school students in 2005-06 received 23,288 concurrent credits from OUS schools. The state's combined cohorts of juniors and seniors in each of those two school years totaled roughly 90,000. All of the state's 17 community colleges and most of its public universities[***] have partnered with Oregon's school districts in concurrent credit arrangements. There is no exact count of high school participation, but it appears that at least half of the state's high schools are involved in concurrent credit, and one official estimates that at least two-thirds of the high schools in the Portland, Salem, and Eugene areas participate to some degree.

Such participation represents strong growth in concurrent credit programs. A 1998 OUS study reported that an estimated 6,660 students were participating in early college options programs of some type, and that the demand for such programs was increasing. Nearly two-thirds of the schools provided students with advanced placement classes, about one-third offered college concurrent credit programs, and about half had students attending courses at community colleges.

Varied program purposes and arrangements. Specific programs that provide concurrent credits vary by objectives, target populations, curriculum focus, institutional arrangements, and sources of payment. The most prevalent is dual credit, followed closely by tech prep. Then there are a handful of concurrent credit programs that serve smaller numbers of at-risk students. These include the Expanded Options program created by the 2005 Legislature, early college or middle college high school programs, and a variant of the early college high school model known as Gateway to College. This program, which is at two Portland area community colleges, is focused on high school dropouts or students at risk of dropping out.

Oregon's secondary and postsecondary schools that participate in concurrent credit programs typically do so through multiple partnerships. In some cases a single school district might partner with both community colleges and state universities. It isn't unusual for one of these postsecondary institutions to have partnerships with dozens of school districts and high schools with a variety of concurrent credit offerings. In some programs students take courses at the high school taught by high school teachers certified to teach postsecondary courses. In other programs students take courses taught at the community college or university campus. In some cases, postsecondary instructors teach concurrent credit students at the high school campus.

Dual Credit. Dual credit courses typically are taught on the high school campus by a high school teacher who meets credential requirements and follows procedures established by postsecondary partners. Most dual credit courses tend to be academic subjects that align high school content with lower division transfer courses. Depending on the pricing policies of the postsecondary partner, students may be assessed an application fee and they pay either nothing or deeply discounted tuition per credit hour. The waived or discounted tuition, according to Oregon's Dual Credit Task Force, saved Oregon dual credit students an estimated $9 million in 2005-06 over what they would have spent on tuition as post-high school community college students. From a budgeting standpoint, dual credit seems to be a relative win for everyone. The student saves on tuition. The high school incurs no additional cost for the instruction, and

[***] Other postsecondary partners included a bordering community college in southwest Washington and an online university program from Utah.

perhaps a slight amount to give teachers release time coverage while they meet occasionally with college faculty. The community college gets some revenue in registration fees and a portion of tuition, as well as additional FTE student headcount for courses taught by high school teachers paid under school district contract.

Tech Prep. Sometimes known as *2+2* or *career and technical education*, tech prep traces its roots to the 1980s when high schools and community colleges began to increase their course offerings aimed at technical occupations emerging in the workplace. The federal government gave impetus to this shift in 1984 when Congress authorized the first version of what is now the Carl D. Perkins Career and Technical Education Improvement Act of 2006. Perkins grants to states enable high school students to earn concurrent credit in tech prep courses, usually taught at the community college, at subsidized fees and tuition. Federal guidelines require articulation between high school and postsecondary courses and linkages between academic and technical course content. In FY 2007, Oregon's Perkins allocation was nearly $1.3 million.

Concurrent Credit programs for at-risk students. While dual credit and tech prep programs predominantly serve Oregon students who are motivated, forward looking, and doing well in school, there are also concurrent credit programs intended for students who are at risk due to various factors. Many come from low income, non-college going backgrounds. Many are behind academically. They may speak English as a second language. They may be homeless, single parenting, or feel they don't fit into the traditional high school. They may have dropped out or be close to it. They may have been expelled or become entangled with juvenile court. They may be foster-care wards.

Concurrent credit programs also reach out to high school students who are at risk due to various factors.

There are three principal programs that serve them:

- *Expanded Options program*. The 2005 Legislature created the Expanded Options program in SB 300, requiring school districts to provide concurrent credit opportunities at no cost to at-risk students in grades 11 or 12. Expanded Options students attend classes at the partner postsecondary school, either a community college or a state university. School districts were to pay a student's fees and tuition at the postsecondary school from at least 50 percent of their Average Daily Membership (budget allocation from the state) for the student. There was, however, a cap on how many credit hours a school district would be required to pay for and a provision for districts to seek a waiver from the 50 percent requirement if the district 1) could demonstrate that that requirement caused a financial hardship to the district, 2) had some form of *accelerated* credit in place such as Advanced Placement (which isn't a *concurrent* credit program), and 3) could show existing accelerated credit programs served all qualified applicant students and at no cost to at-risk students.

  Despite the generous waiver provisions and the credit cap, which effectively limited a school district's financial exposure, a group of institutional stakeholders disliked the participation mandate and the transfer of high school funds to postsecondary schools for concurrent credit instruction. In the 2007 session of the Legislature they lobbied successfully to let schools districts opt out of *participation in the program* for the same reasons the districts had previously been able to seek a waiver from the 50 percent funds transfer. Thirty-four school districts have opted out of the program.

  In a December 2007 report, the Oregon Department of Education noted that 1,229 students (among 181 districts responding to an online survey) participated in the Expanded Options program. This probably reflects a fraction of the program's original potential. At the time SB 300 passed, its sponsors said they expected the Expanded Options program to grow accelerated studies in Oregon 50 percent more than levels existing at that time.

- *Early or middle college high school*. These are full curriculum, concurrent credit small school programs aimed at students 16 years and over who are not succeeding in the traditional high school

environment. Students spend all or a part of their day on the campus of the community college partner. The course of study is personalized and rigorous, starting with orientation and career development coursework, leading to a high school diploma and an associate's degree or up to two years of college credit. The school district often pays tuition and technology fees. A recent state survey reports 17 such programs in Oregon. These include the original Gateway to College program created by Portland Community College and several supported by the Bill & Melinda Gates Foundation, such as Gateway to College at Clackamas Community College.

Examples of Concurrent Credit Programs in Oregon

Largely on their own initiative, schools districts and postsecondary institutions in Oregon have created a varied menu of concurrent credit partnerships and offerings. Here are some examples of such programs and how they work.

Linn-Benton High School Connections. Linn-Benton Community College has concurrent credit relationships with all of the high schools in Linn and Benton counties and has some students from other counties as well. What Linn-Benton calls College Now, concurrent credit classes taught by school district teachers on high school campuses, includes both dual credit study in lower division academic courses and tech prep classes in specific occupational fields. Its Alternative Learning Opportunities program offers the same range of concurrent credit classes at the Linn-Benton campus to almost 500 students per school year, about two-thirds of them Expanded Options students.

The biggest concurrent credit program challenge at Linn-Benton Community College is training high school students how to be college students.

Kathy Chafin, the college's administrator for Alternative Learning Opportunities, says there has been strong growth in demand for concurrent credit programs in the 15 years she has been involved in the program. "The biggest challenge," she said, "is training high school students how to be college students, to be self-motivating and self-reliant, to understand that they have to be at college level in reading and writing." Linn-Benton requires concurrent credit students to take a placement test in reading, writing, and math to determine their readiness for grade 13 study. The school offers remedial classes to students who need to upgrade their skills.

Linn-Benton's largest partner (in student participation) is Lebanon High School, where about 200 students a year, among 1,200, participate in both College Now and Alternative Learning Opportunities as a part of what the high school calls Beyond Lebanon High School. School counselor Larry Anderson, who coordinates Beyond LHS, says the program has motivated a growing number of students to attend Linn-Benton. "When I started five years ago," he said, "I inherited a tradition called the senior interview. It seems about 95 percent said they wanted to go on to college, and many said Linn-Benton because they knew it. But the next year it seemed that very few did go. Now we're seeing a lot of them going on, many more than previously." He credits the program for reducing what he calls "senioritis – kids taking as many slacker courses as they can." "It's exciting," he added, "to see the number of student opting in."

Gateway to College at PCC. This Portland Community College model serves at-risk youth, 16 to 20 years old, who have dropped out of high school or who have all but given up. The program is designed so that low-income youth, first-generation college goers, English language learners, students of color, and other young people underrepresented in higher education can simultaneously earn a high school diploma and an associate's degree or up to two years of credit toward a bachelor's degree – tuition free.

Students are taken under wing by a team of instructors and student support specialists with experience and interest in at-risk youth. In their first term, students take foundational courses as part of a learning community. This experience builds their academic and personal skills, preparing them for college courses with the general student population. During the foundation term, students take reading, writing, and math, plus a college survival and success class where they learn how to take notes, study for tests, and juggle school, work, and family life. After completing the foundation term, students take a career development

class to help them focus their academic goals and select a major. They also begin taking classes on the comprehensive campus. By the time they earn their concurrent high school diploma, students who stay with this program, on average, accumulate 77 of the 90 credits required for an associate's degree at PCC.

"The adult learning environment and the flexibility of a community college are part of the magic that works for these kids," said Laurel Dukehart, executive director of the Gateway to College National Network. "Being around older learners makes them feel more responsible. They like the diversity and the lack of what they call drama. They can focus on school and they have very few behavior problems."

Along with the Early College High School Initiative, the Gateway to College National Network is an effort supported by the Gates Foundation to promote the early college high school and Gateway to College models nationwide. Initiative partners have started or redesigned almost 220 schools in 26 states and the District of Columbia. By fall of 2008, the Gateway to College National Network will have replicated the Gateway to College program at 23 sites across the country.

Westview High School Challenge Program at Portland State University. The PSU Challenge Program offers high school seniors an opportunity to earn PSU credits at a low cost while they are still in high school. Challenge courses count toward the completion of a bachelor's degree at PSU and can be transferred to any school in the Oregon University System, as well as to many colleges and universities throughout the nation. The Challenge courses offered at Westview are calculus and Spanish V. (Students may take only two Challenge courses for PSU credit.) The fee for Challenge courses in 2007-08 was $174.

Challenge Program courses are equivalent to courses taught at PSU. Carefully selected high school teachers, who are appointed adjunct instructors by the University, teach the courses as part of their regular teaching loads. Challenge Program teachers have graduate degrees in the disciplines they teach and a minimum of two years' teaching experience. The PSU academic departments that offer the courses approve all Challenge instructors, who meet regularly with department faculty to discuss course content.

Challenge courses examine subjects in depth and require substantial student effort. To earn Challenge credit, a student must have at least a 3.0 cumulative GPA.

Effectiveness of Concurrent Credit Programs

Studies of concurrent credit programs in Oregon and the nation are sparse, but generally they support anecdotal evidence that these programs are effective in preparing students of all backgrounds for postsecondary work, for assisting their transition to the next level, and for improving their persistence in completing postsecondary study.

Research suggests that concurrent credit programs are effective in preparing students of all backgrounds for postsecondary work.

Favorable verdict in Oregon study. As a part of its mandate, Oregon's Dual Credit Task Force commissioned the Oregon University System's Office of Institutional Research office to look at the effectiveness of dual credit programs in Oregon. The research team focused on students enrolled in dual credit programs in the 2005-06 school year and how they fared over the next school year in subsequent postsecondary courses in a particular sequence compared to students taking the same sequence who started community college courses *after* finishing high school.[19] At the upper end of course sequences, dual credit students, in most cases, matched or outperformed their college-prepared counterparts in both community college and university settings. Only a small percentage of dual credit students retook courses they had passed while in high school (although at a higher rate than comparison group students). Dual credit students persist as well or better (although not significantly better) than students in the comparison group.

Good Outcomes in New York and Florida. In 2007 a team led by Melinda Mechur Karp from Columbia University Teachers College took a close look at the impact of concurrent credit (what it called dual

enrollment) on high school students in New York and Florida committed to career technical education. In Florida it also examined the outcomes for all students involved in concurrent credit programs.[20] The study found that:

- Dual enrollment can be an effective transition strategy for a range of students, not only those most academically successful in high school.
- Dual enrollment students in Florida were more likely than comparison students to earn a high school diploma, to enroll in postsecondary education in the state university system, to enroll in college full-time, and to have higher grade point averages (after the first and fourth semesters and cumulatively). This effect on GPA is particularly important because its effect size remains strong in the long run. Importantly, the impact varies by the number of dual enrollment courses taken, indicating an intensity effect for participation. For example, students who took only one dual enrollment course had a 0.158 point higher cumulative GPA while those students who took five or more had almost a 0.27 point difference.
- There is a strong statistical association with persistence in college as well as a large impact on the total postsecondary credits earned. Dual enrollment participants had earned, on average, 15 more credits than their non-dual enrollment peers, but those who took more than five dual enrollment courses had a 25-credit advantage.

Specifically in regard to tech prep (or what it called career technical education, or CTE) students, the study found:

- Dual enrollment students in the CTE population were 8.6 percent more likely than comparison students to enroll in the state university system in Florida
- 9.7 percent were more likely to pursue a bachelor's degree at City University of New York.
- There were significant favorable impacts on GPA and total postsecondary credits earned in both states, and even more so in Florida.
- Dually-enrolled CTE students in both states were more likely than their non-dual enrolled peers to progress toward a degree, as evidenced by their accrual of significantly more credits after three years in Florida and three-and-a-half years at CUNY.
- Males and at-risk students benefitted from dual enrollment to a greater extent than their female and more advantaged peers. This was particularly true for students' likelihood of enrolling in college after high school graduation and their grade point averages, both after the first semester and cumulatively.

Males and at-risk students benefitted from dual enrollment to a greater extent than their female and more advantaged peers.

Laurel Dukehart of the Gateway to College National Network cites the last bullet point finding of the Karp report as encouraging quantitative support for what she and others see as a principal benefit of concurrent credit models for at-risk and dropout students.

Need for more and better data on program effectiveness. Despite the studies referenced above, there is a need for more good data on concurrent credit effectiveness. In their study *Pathways to College Access and Success*,[21] Katherine Hughes and colleagues note,

> Most sites do not have systematic data collection procedures, and most of the data available at the sites indicate short-term outcomes, making program evaluation difficult. There is little data sharing between high school and college partners, and many sites lack staff time and knowledge to collect and use data effectively.
>
> Perceived benefits are not yet supported by evaluation research. Programs should engage in data collection in order to confirm that students, particularly middle- and low-achieving students, do achieve these outcomes from their program participation.

Favorable Factors in Expanding Concurrent Credit in Oregon

Because concurrent credits programs give high school students a head start, improve academic outcomes for them, and save them money at the same time, these programs are appealing to students and their families. Since about a quarter of juniors and seniors are involved in concurrent credit offerings, the concept seems to have enough critical mass to push to higher participation.

Creation of the Dual Credit Task Force, and the recommendations it has drafted, suggest a friendly policy environment for concurrent credit, and it is significant that the task force sees such programs as a positive way to achieve Oregon's 40-40-20 aspirations. Moreover, concurrent credit offerings have both a professional and student constituency. Tech prep programs, in addition, have an employer constituency.

Rapid evolution of the economy and its job demands will, in all likelihood, continue to keep pressure on education institutions to prepare students for postsecondary education and work. Concurrent credit seems to be a natural avenue for meeting that demand.

Challenges of Expanding Concurrent Credit in Oregon

Despite the favorable factors cited above, Oregon nevertheless faces a number of hurdles in growing student involvement in concurrent credit offerings.

From a policy perspective, Oregon has produced mixed signals on concurrent credit programs.

Mixed signals on Oregon's commitment to concurrent credit. The way the Expanded Options program, described on page 39, was weakened in the 2007 session of the Legislature sends a mixed signal on Oregon's policy commitment to concurrent credit. If the Expanded Options program had not been watered down, according to its supporters, it would make a greater difference in the prospects of many more at-risk students and would be a re-entry draw for more dropouts.

Impending teacher shortages threaten concurrent credit growth. Postsecondary partners set the qualifications of high school teachers who teach dual credit courses. Most of the partnerships are with community colleges, and they typically require a master's degree or 27 hours toward a master's degree in the subject being taught. Impending retirements among high school teachers with these qualifications threatens to reduce the pool of teachers available to teach dual credit courses, and the shortage appears to be most acute in rural areas. Since the graduate credentialing path for most public school teachers leads to the master of arts in teaching, there isn't a robust pipeline of high school teachers with graduate degrees in subject disciplines.

As a partial answer to this impending shortage, the Dual Credit Task Force recommends creation of a fund to assist teachers in pursuing advanced degrees in academic disciplines. OUS partner schools, it turns out, are less stringent about the academic credentials of high school teachers of dual credit courses, perhaps because these schools use graduate teaching assistants so extensively.

Program communication and recruiting. Karp's two-state study suggested that underrepresented students may not have the same opportunities to learn about dual enrollment opportunities as their peers or may be less inclined to take advantage of such opportunities. It is important, therefore, to ensure that programs pay particular attention to the recruitment of such students.

Affordability. One justification for Expanded Options, early college high school, and Gateway to College is that at-risk students who could benefit from intensive support and immersion in a college learning environment cannot afford the costs. That is probably a valid argument but it runs up against anxieties in some quarters that helping these students is too expensive or a threat to school district ADM funds. The two-state study by Karp and her associates suggested "states that cannot afford tuition coverage for all participating students might implement a sliding scale to ensure that tuition does not deter disadvantaged students from enrolling."

The Gateway to College National Network argues that concurrent credit programs for at-risk students can be a win-win for students, school districts, and community colleges. School districts that re-enroll non-attending students on their books are eligible for ADM. According to Linda Huddle, director of alternative programs for Portland Community College, the school districts then pass most of that funding through to their community college partners for providing the concurrent credit instruction. "A major achievement in affordability in Oregon," said Huddle, "is to move away from the concept of seat time to look at the number of college credits a student takes. It amounts to looking at full-time high school and full-time college course loads as the same."

Dukehart underscores the social and economic benefits of making concurrent credit accessible to at-risk students. "Paying for education for disconnected youth makes economic sense for Oregon communities, she said. "Helping students complete their high school diploma, whether in the high school or college setting, costs far less than paying for the social costs associated with high school dropouts."

Support services. Hughes and colleagues found that nonacademic as well as academic support services are essential in helping students understand and meet the demands of a postsecondary environment. This is particularly important for students who have previously not been successful in school. In general, services vary along two dimensions. They may vary in their sponsor, meaning whether they are offered by the high school, by the college, or through a collaboration. They also may vary in their content, for example whether services provide academic support, general personal support, or specific college-preparatory activities, such as assistance with college applications or financial aid. Services offered through collaboration often are more cohesive and tailored to students' needs. Students in concurrent credit programs should ideally have access to both high school- and college-sponsored services, as well as customized services that are developed collaboratively by the institutional partners.

POLICY RECOMMENDATIONS

Policy Context Established in *Raising the Bar for PreK-20 Education in Oregon: Six White Papers*

Just as this paper builds on the findings of the six white papers described earlier, it also builds on the recommendations of those papers, especially the following two:

Raise attainment for more people. Oregon must strive to help more Oregonians than ever before to achieve higher levels of education than ever before – and better than ever before. In concrete terms, this means striving to achieve *40-40-20*. Oregon should strive for 40 percent of Oregon adults to attain have a bachelor's degree or higher (compared with 28 percent now). Another 40 percent should have at least an associate's degree or other technical credential, and the remaining 20 percent should have a high school diploma that represents a high level of academic and work readiness skills.

Build a student-centered education system in curriculum, budgeting, and data systems. This calls for fundamental transformation of our existing public education system, shifting to a PreK-20 perspective that is characterized by:

- A student centered frame of reference in curriculum, instruction, and assessment
- A unified, transparent education budget and budgeting process in which money follows students and expenditures are tied to performance outcomes
- Development and deployment of a comprehensive student data system that supports student planning and achievement, smoother education pathways, education program improvement, and institutional accountability.

Views from Uncommon Discourse

Uncommon Discourse brought together some of Oregon's most prominent and engaged educators in the spring of 2008 to assess the condition of Oregon education and what should be done to make it better. They said:

Transform high schools. Oregon must transform its outdated high school system, in particular improving its curriculum and instruction and its connections to middle schools and postsecondary institutions.

Make them student-centered. Like the rest of the education system, high schools must become more student-centered and less adult- and institution-centered.

Expect much of all kids. High schools and their personnel must adopt the belief that all students can learn and they must stop tolerating 30 percent dropout rates and a significant portion of graduates unprepared to succeed in postsecondary education.

Make education universal through grade 14. Just as Oregon has provided Oregonians free public education up through grade 12, the increasing importance of further education attainment now makes it imperative that Oregon fully fund universal access to education through grade 14.

Tailor education to student needs. It is time to abandon the one-size-fits all education delivery model, adopting practices that customize learning, throw out seat time and subjective grading, make learning relevant to student interests and goals, help students achieve at high proficiency-based standards, and blur the distinctions between middle school and high school – and high school and college.

Make policy and governance student-centered. All matters of policy and governance should start with the paramount question, Is this good for kids? That should shape the governance culture and discussions and decisions about performance metrics, budgeting, accountability, delegation of authority, institutional relationships, and other pertinent matters.

Proficiency-Based Assessment and Instruction

Make proficiency-based practice the definition of standards-based education. Oregon should adopt the official position that the standards-based education system it seeks to establish requires proficiency-based assessment and instruction.

At the secondary school level, require proficiency options and features that lead inevitably to proficiency adoption. State education policymakers should choose either of two implementation paths to accomplish a standards-based system defined by proficiency practice. The first path, which is less assertive, would involve either or both of two directives designed to offer students school-level choices in proficiency-based classes: 1) require high schools, and perhaps middle schools, at some defined date to guarantee every student the opportunity to earn a certain number of credits – or credits in a specified set of subjects – by proficiency; 2) require schools to offer a proficiency-based option in at least one class in any subject where more than one class section is available. This should be sufficient to jump start proficiency practice on a school-wide basis in districts across Oregon. The more assertive path would be to mandate proficiency-based *assessment* (but not necessarily instruction) for all content classes according to proficiencies defined in content standards. Because assessment based on standards tends to drive and define instruction, such a mandate would lead to proficiency-based instruction.

Define proficiency-based practice. There is a tendency for practitioners comfortable with traditional time- and grade-based instruction and summative-oriented assessment to say of proficiency-based practice, "Oh, we already do that." Overall, not likely. Proficiency-based practice should be defined by its salient characteristics, which are described in this paper and summarized in the table on page 9.

Preserve out-of-class experience in proficiency practice. As proficiency-based education moves into the classroom in favor of traditional assessment and instruction, out-of-class proficiency credit should not be lost or minimized as a learning venue. Real-world, hands-on experience tied to standards and proficiencies is a powerful, motivating learning experience for all students.

Increase state staff support. The Oregon Department of Education should continue and step up its support for the adoption of proficiency practice, perhaps by reconstituting the Credit for Proficiency Task Force as the Proficiency-Based Practice Office. This office should be given a mandate and adequate funding to hold regular state and regional conferences devoted to proficiency adoption, to develop media materials on proficiency, and to provide school districts with information, resource referrals, and site consultations on proficiency adoption.

Build professional learning communities. Oregon schools should be organized to operate as professional learning communities as defined on page 11 whether or not they adopt proficiency practice, but *especially* if they adopt proficiency practice. They should receive necessary staff development to operate in this fashion, and administrators should make ample time available in the daily and weekly schedule for their professional learning teams to work on student progress and instructional improvement.

Make proficiency-practice prominent in educator development. Through persuasion, incentives, targeted funding, and mandates if necessary, Oregon policy should align educator preparation and in-service training to focus substantially on standards-based, proficiency-based assessment and instruction. Proficiency-based practice should be part of the undergraduate and graduate curriculum for prospective administrators, teachers, and counselors at all schools of education, public and private. Faculty from schools of education should be encouraged to spend meaningful time in working classrooms learning about proficiency-based practice. One of Oregon's schools of education, whether public or private, should make a seed investment to develop a leadership role in proficiency research and advocacy, perhaps building an institute on proficiency practice by seeking foundation grant funding.

Small Learning Communities

Local school districts, and perhaps state-level public policy as well, should recognize small learning communities as a valuable tool to enhance student success by forging closer working relationships

between professionals – ideally professional learning communities – and attentive support to students by teams of caring adults. Just as proficiency-based practice cannot be implemented successfully without professional learning communities supported by strong school building leadership, neither can small learning communities.

Favor flexible application in small learning communities. Local school districts should make maximum use of small learning communities for this same reason, but in flexible configurations as needed.

Make room for many kinds of small learning communities. Oregon policy should accommodate many forms of small learning communities, whether schools-within-a-school, age-based or career cluster academies, charter schools, magnet schools, or online communities, in order to give schools and students wide choices in learning venues.

Concurrent Credit Programs

Increase program promotion and recruitment. Where sufficient program capacity exists, both high schools and postsecondary partners in concurrent credit programs should make sure they are devoting sufficient attention to program promotion and to recruitment of high school students.

Restore Expanded Options. Oregon should pay more than lip service to concurrent credit programs for at-risk students. At a minimum it could start by restoring SB 300, the Expanded Options program, to serve a greater number of at-risk students at no or low cost, as it was originally intended to do before it was weakened in the 2007 Legislature by institutional lobbyists – who were apparently, in that instance, not student-centered in their thinking. (Of course, if Oregon were to adopt universal education through grade 14, as recommended above, Expanded Options would not be needed.)

Address teacher shortages. Concurrent credit partner institutions should look for cooperative solutions to the current and growing shortage of high school teachers who can meet the postsecondary credentialing requirements to teach concurrent credit courses on the high school campus. Inconsistencies in what community colleges and state universities require in this regard suggests there is room for accommodation, perhaps by giving priority to a candidate's teaching ability and track record in a subject over an arbitrary degree requirement. Policymakers should adopt the recommendation of Oregon's Dual Credit Task Force to create a fund to grant financial aid to high school teachers seeking the graduate level credentials required to teach community college courses on the high school campus.

Continue to collect and analyze data on concurrent credit outcomes. This includes but goes beyond the Dual Credit Task Force recommendation that Oregon continue to look at results for dual credit programs. It should also include data collection and analysis at the local level, and aggregate data collection and analysis of student outcomes for dual credit, tech prep, Expanded Options, and other concurrent credit programs.

IMPLICATIONS FOR GOVERNANCE

Education Governance Should Do More Than Just Happen

The governance structures that organize, lead, and support our education sectors and institutions have evolved over time. Seldom are they deeply re-examined and reorganized to fit new conditions. The earlier white papers, Uncommon Discourse, the views of those interviewed, and the views of leading thinkers attempt to take that rare hard look what we now need from education, and, by implication, from governance. This section distills and suggests governance issues for thought and discussion by stakeholders, and for potential redesign of our education governance structures.

Acknowledging the problem. The system as it is designed doesn't deliver education attainment at the level Oregon needs because its design is outmoded. It was *designed* to sort the best from the rest, not get the best out of everyone. The system isn't structured to attain 40-40-20 or anything close to that aspiration. If it were – with a student-centered mode of operation – all the system sectors would routinely be working closely with one another: PreK and K-12, universities and K-12, high schools and middle schools, high schools and community colleges, community colleges and universities. Faculties would be working with one another. Students would move seamlessly through the grades and across current sector levels. This does happen now from place to place, to a large extent because dedicated educators make it happen, school by school, partnership by partnership. But it is not built into the fragmented design of the system nor into the system's fragmented governance structure.

What the fragmentation looks like. There are four distinct sectors, each governed, budgeted, and measured differently from the others.

Pre-kindergarten. The Pre-K system is the most separate from the other sectors and is driven largely by federal mandates and local sites. A large share of preschoolers are served through the private sector.

Kindergarten through high school. The K-12 system is the largest, with roughly 550,000 students in close to 200 districts. The State Superintendent of Public Instruction is a non-partisan statewide elected office with accountability to the public at large. The superintendent runs the State Department of Education, which is fundamentally structured as a mandating, compliance-oriented agency. The Superintendent does not report to the State Board of Education; Board members are appointed by the Governor and ratified by the Senate. The State Board oversees the K-12 system from a policy perspective but has no budget responsibility beyond approving the submission of the Department's budget. Funds are appropriated by the legislature and distributed to districts according to a weighted formula, but the districts are not tightly bound to spend the funds as they are weighted. Each district has a local elected board and a superintendent hired by the board. The local boards negotiate contracts with the teachers union and other unions, which pits a part-time, voluntary board against professional negotiators. Districts have a geographic claim on the students living within their boundaries, and student requests to transfer to other districts' schools are seldom granted because the "losing" district does not want to give up the funds associated with the student.

Community college system. The State Board of Education also sets policy for the community college system, made up of 17 community college districts. The Board hires the Commissioner who maintains a small staff of people to work on community college and workforce development issues. Each college has its own local board and that board hires the college president. The presidents do not report to the Commissioner. Funding comes from local and state sources; the Board of Education has a large say in the distribution formula to the colleges for state funds that are allocated by the Legislature.

Oregon University System. OUS is comprised of seven universities and is overseen by the State Board of Higher Education, which hires the Chancellor. The Board hires the university presidents and they report to the Board through the Chancellor, but they generally run their campuses with substantial autonomy. There are three major universities: Portland State University, Oregon State University, and the University of Oregon. There are three regionals, Eastern Oregon University, Southern Oregon University, and

Western Oregon University, as well as Oregon Institute of Technology. Oregon Health & Sciences University, affiliated with the university system, has a public corporation status. For budget purposes the university system is viewed as a state agency, which means that the Legislature has line-item oversight of system budgets even though the state share of university revenues, excluding student aid, is about 13 percent. OHSU changed its status largely to avoid state micromanagement.

A New Design Is Needed

Give students easier access to more options. While a great deal of effort over the past decade has been made to smooth the disruptive transitions that many students experience as they try to move from one sector to another, the lines need to be further blurred. As this paper has discussed, we need to make it very easy for students to choose among multiple offerings and delivery mechanisms such as concurrent enrollment, distance or virtual learning, and among multiple education providers and programs regardless of "home district" location.

Simplify system governance. To make a system simpler for the end-user (students in this case), it is necessary to make a system simpler to operate for those who govern it. If Oregon is committed to the concept of a PreK-20 education continuum that puts students and their needs in the center of the design, we need to simplify and clarify the governance structure. Based on views expressed at Uncommon Discourse and by others interviewed in depth, this paper recommends some concepts that could be applied to integrate and manage the sectors better from both the student and the taxpayer perspective.

Recommended Design Concepts

Consider a single governing board. A systemic Pre-K-20 continuum is more likely to be accomplished with one oversight board that can evaluate and manage policy and capacity priorities. A single board might be appointed to replace the current two-board structure, or the existing two boards might formally merge their top-level responsibilities into a governing Joint Board. Those top-level responsibilities might include: distribution authority for a budget built along the lines recommended by an earlier white paper in this series, one that is transparent, integrated, student-centered, and performance-based; hiring and oversight of the sector leaders; policy setting authority for determining education attainment targets, integrating curriculum ladders, and other large-scale measures of performance; and monitoring and measuring "best-practices" accountability to the governor and legislature. It is clear that the data system requirements also set forth in an earlier paper are essential to provide necessary instructional and institutional feedback and improvement.

Build capacity and access. Such an oversight board, working with the executive and legislative branches, might work on building greater capacity of and access to higher education offerings. This could include alignment of proficiency-based instruction from secondary schools to postsecondary institutions and a commitment to assure access to post-secondary education to all students who leave high school with the new diploma and the higher standards it represents.

Increase student options. The oversight board might work with the executive and legislative branches to implement policies that increase the permissiveness and incentives for more small and charter schools, virtual academies, and other delivery mechanisms to allow students to find programs that suit their needs.

Fund students rather than schools. The oversight board would ensure that public funds would follow and support students as they make school or program choices. The budget should be designed so students, at their own discretion, could choose college courses, online programs, or other appropriate learning programs.

Create new local governance. Each local institutional unit (district, community college, university) might have a local elected or appointed board responsible to its public and to the oversight board for operations policies and results. This governance level might join forces on certain issues, including efficient student transitions and program access and perhaps various contract negotiations.

Free students from attendance boundaries. K-12 districts might make their boundaries permeable in both directions so that students and their families could avail themselves of the best programs to meet their needs. Students would flow in and out of districts as the programs offered by the district were attractive to them. The funds to support the students would move with them. The dynamic would shift from the transferring district blocking a student's move to the acquiring district registering students as they have capacity. Districts perceived to have strong offerings might be able to build their capacity based on greater demand for their offerings.

Permit service outsourcing. Districts might have latitude to enter into contractual agreements with other districts or organizations for school or program management to increase students' access to quality programs.

Expect fundamental system shocks to occur. Finally, the system must look forward to the likely "disruptive innovations" described by Clayton M. Christensen and colleagues in *Disrupting Class: How Disruptive Innovation Will Change the Way the World Learns.* The governors of the system must prepare for technological and other advances that may reset learning structures and teaching institutions at very fundamental levels.[22]

Appendix A. Uncommon Discourse Participants

May 9, 2008 Session			
Ron	Bassett-Smith	Dean, Strategic Partnerships & Information Resources	Chemeketa Community College
Colin	Cameron	Director of Professional Development	COSA
Jay	Casbon	CEO	Graduate School of Education, OSU
Ed	Dennis	Deputy Superintendent	Oregon Department of Education
Laurel	Dukehart	Director, Gateway to College National Network	Gateway to College National Network
Lorna	Fast Buffalo Horse	Director/C-Coordinator	LÊP High
Vickie	Fleming	Superintendent	Redmond School District 2J
G.M.	Garcia	Special Programs Administrator	North Clackamas School District
Scott	Giltz	Dean, Technical Career Education Division	Clackamas Community College
Nancy	Golden	Superintendent	Springfield School District 19
Brian	Hanson	Graduate Education Student	Portland State University
Dan	Jamison	Superintendent	Sherwood School District 88J
Cheryl	Livneh	Associate Vice Provost Extended Studies	Graduate School of Education, PSU
Fred	Locke	Principal	Renaissance Arts Academy, Marshall Campus
Mimi	Maduro	Pathways Initiative Statewide Director	Pathways Initiative/Community Colleges Workforce Devel
Ann	Malosh	Division Dean, Health Occupations and Workforce Education	Linn-Benton Community College
Nate	Messer	Graduate Education Student	Portland State University
Cam	Preus	Commissioner	Department of Community Colleges
Nan	Poppe	Dean	Portland Community College
Edward	Ray	President	Oregon State University
Deborah	Sommer	Superintendent	Canby School District 86
Dave	Squire	President/Owner	PCC Board of Directors
Bob	Stewart	Superintendent	Gladstone School District
Carmen	Urbina	Family and Community Coordinator-Superintendents Office	Eugene School District
John	Wilhelmi	Director of High School Achievement	Portland Public Schools

June 3, 2008 Session			
Brenda	Brecke	Dean, Grants and Resource Development	Southwestern Oregon Community College
Matt	Coleman	Principal	Westview High School
Randy	Hitz	Dean, Graduate School of Education	Portland State University
Kevin	McCann	Executive Director	OSBA
Salam	Noor	Assistant Superintendent	Oregon Department of Education
George	Pernsteiner	Chancellor	Oregon University System
George	Russell	Superintendent	Eugene School District 4J
Carole	Smith	Chief of Staff	Portland Public Schools
Dave	Squire	President/Owner	Tygh Valley Group
Bob	Stewart	Superintendent	Gladstone School District
Courtney	Vanderstek	Assistant Executive Director, The Center for Teaching & Learning	Oregon Education Association
Duncan	Wyse	President	Oregon Business Council
		Member	Oregon State Board of Education

Uncommon Discourse Participating Support Staff			
Donna	Acord	Assistant Director	E3: Employers for Education Excellence
Eva	Bogue	School Change Coach	E3: Employers for Education Excellence
Jill	Kirk	Vice President	Oregon Business Council
Charlie	LaTourette	Communications Director	E3: Employers for Education Excellence
René	Léger	Executive Director	E3: Employers for Education Excellence
Jill	Neyenhouse	School Change Coach	E3: Employers for Education Excellence
Karen	Phillips	Director	E3: Employers for Education Excellence
Jennifer	Sattem	Data Analyst	E3: Employers for Education Excellence
Laurie	Thurston	School Change Coach	E3: Employers for Education Excellence

Appendix B. Individuals Interviewed for This Paper

Donna	Acord	Assistant Director	E3: Employers for Education Excellence
Emily	Anderson	Business and Math Teacher	Scappoose High School
Larry	Anderson	Counselor	Lebanon High School
Nancy	Arlington	Consultant	Oregon Education Association
Robert	Barry	Associate Professor of Education	Marylhurst University
Gail	Black	Vice President	Portland Association of Teachers
Michael	Bremont	Assistant Principal	Redmond High School
Cliff	Brush	Senior Project Manager, Superintendent's Office	Portland School District
Tamra	Busch-Johnsen	Executive Director	Business Education Compact
Kathy	Chafin	High School Programs	Linn-Benton Community College
Richard	Clarke	Chief Human Resources Officer	Portland School District
Matt	Coleman	Director, Secondary Programs	Springfield School District
David	Conley	Director	Center for Educational Policy Research
Susanne	Daggett	Education Specialist	Oregon Department of Education
Randy	Dalton	Vice Principal	Southridge High School
Steve	Day	Principal	Health and Science High School, Beaverton
Laurel	Dukehart	Executive Director	Gateway to College National Network
Nancy	Golden	Superintendent	Springfield School District
Karen	Gray	Superintendent	Parkrose School District
Bob	Kieran	Director, Institutional Research Services	Oregon University System
Robin	Kobrowski	District Assessment Specialist	Beaverton School District
Kathi	Koenig	Consultant	Oregon Education Association
Doug	Kosty	Assistant Superintendent, Assessment and Information Services	Oregon Department of Education
Rebecca	Levison	President	Portland Association of Teachers
Michael	Lindblad	Teacher, Credit by Proficiency Coordinator	Gresham High School
Jack	Musser	Superintendent	Forest Grove School District
John	O'Neill	Principal	Forest Grove High School
Hilda	Rosselli	Dean, School of Education	Western Oregon University
Thomas	Ruhl	Chair, Department of Education	Marylhurst University
Jennifer	Sattem	Data Analyst	Oregon Small Schools Initiative; E3
Jim	Schoelkopf	Senior Research Associate	MPR Associates, Inc.
Gary	Sehorn	Administrator for Curriculum, Instruction, and Assessment	Beaverton School Dsitrict
Mark	Siegel	Assistant Headmaster	The Delphian School
Dee	Simmons	Consultant	Oregon Education Association
Diane	Smith	Director, Curriculum and Instruction	Albany School District
Rebecca	Steinke	Science Teacher	Scappoose High School
Rick	Stiggins	Executive Director	ETS Assessment Training Institute
Debbie	Treece	K.I.D. Coordinator	Chugach (Alaska) School District
Courtney	Vanderstek	Assistant Executive Director, The Center for Teaching & Learning	Oregon Education Association
Jenni	Villano	Director, Alternative Schools	Portland School District
Jerry	Wilks	Principal	Oregon Connections Academy
Duncan	Wyse	President	Oregon Business Council
		Member	Oregon State Board of Education

References

[1] *Raising the Bar for PreK-20 Education in Oregon: 6 White Papers*, 2005. Oregon Education Roundtable, a discussion forum and research project sponsored by the Oregon Business Council, the Lumina Foundation for Education, and the Oregon Community Foundation. http://www.oregonedroundtable.org/PDF%20Folder/6%20White%20Papers.pdf

[2] Callan, Patrick M., Peter T. Ewell, Joni E. Finney, and Dennis P. Jones. *Good Policy, Good Practice, Improving Outcomes and Productivity in Higher Education: A Guide for Policymakers*, 2007. The National Center for Public Policy and Higher Education and The National Center for Higher Education Management Systems. http://www.highereducation.org/reports/Policy_Practice/index.shtml

[3] "How 'Disruptive Innovation' Will Change the Way We Learn" by Clayton M. Christensen, Michael B. Horn, and Curtis W. Johnson. Education Week, June 4, 2008.

[4] *Knowing what Students Know, The Science and Design of Educational Assessment*. Committee on the Foundations of Assessment, James W.Pellegrino, Naomi Chudowsky, and Robert Glaser, *editors.* Board on Testing and Assessment, Center for Education, Division of Behavioral and Social Sciences and Education, National Research Council. National Academy Press, Washington, D.C.

[5] Stiggins, R.J. *Assessment Manifesto, A Call for the Development of Balanced Assessment Systems*, 2008. ETS Assessment Training Institute, Portland, Oregon. http://www.assessmentinst.com/forms/AssessManifesto-08.pdf

[6] Fisher, Douglas, and Nancy Frey. *Checking for Understanding: Formative Assessment Techniques for Your Classroom.*, 2007. Association for Supervision and Curriculum Development, Alexandria, VA.

[7] Marzano, Robert. *Classroom Assessment and Grading That Work*, 2006. Association for Supervision and Curriculum Development, Alexandria, VA.

[8] Black, Paul, and Dylan Wiliam. "Inside the Black Box: Raising Standards Through Classroom Assessment," October, 1998, Phi Delta Kappan, Vol. 80, No. 2. http://www.pdkintl.org/kappan/kbla9810.htm

[9] *National Evaluation of Smaller Learning Communities: Literature Review.* Abt Associates, Inc. February 2002. Cambridge, Massachusetts. http://www.abtassociates.com/reports/SMALLER.pdf

[10] *Breaking Ranks: Changing an American Institution*, 1996. National Association of Secondary School Principals. Reston, Virginia.

[11] *Evaluation of the Bill & Melinda Gate's Foundation's High school Grants Initiative, 2001-2005*. The American Institutes for Research and SRI International. August 2006. Washington, D.C.

[12] Ibid.

[13] Stevens, W. David. *If Small Is Not Enough…? The Characteristics of Successful Small High Schools in Chicago* (April 2008). Consortium on Chicago School Research at the University of Chicago, Chicago, Illinois. http://ccsr.uchicago.edu/publications/SmallSchoolsApr2008.pdf

[14] Hammond, Betsy, and Lisa Grace Lednicer. "Smaller Schools, Same So-So Grades." *The Oregonian*, June 8, 2008.

[15] Smaller Learning Communities Awards Database, U.S. Department of Education, Washington, D.C. http://slcprogram.ed.gov/search.html

[16] *Implementation Study of Smaller Learning Communities*, 2008. U.S. Department of Education. Washington, D.C. http://www.ed.gov/rschstat/eval/other/small-communities/final-report.pdf

[17] *Leading the Conversion Process, Lessons Learned and Recommendations for Converting to Small Learning Communities*, 2006. Fouts & Associates, LLC, Bothell, Washington. http://www.spu.edu/orgs/research/Leading%20the%20Conversion%20Process%2010-6-06.pdf

[18] "Recommendations for Improving and Expanding Dual Credit Programs" (May 2008). [Oregon] Joint Boards of Education. http://www.ous.edu/state_board/meeting/dockets/ddoc080502-JB%20Dual.pdf

[19] Jacobs, Jonathan, and Tom North. Dual Credit in Oregon: An Analysis of Students Taking Dual Credit in High School in 2005-06 with Subsequent Performance in College. Office of Institutional Research, Oregon University System. Eugene, Oregon. http://www.ous.edu/state_board/meeting/dockets/ddoc080430-UEE-DCrpt.pdf

[20] Karp, Melinda, et al. *The Postsecondary Achievement of Participants in Dual Enrollment: An Analysis of Student Outcomes in Two States* (October 2007). National Research Center for Career and Technical Education, University of Minnesota, St. Paul, Minnesota. http://www.nccte.com/publications/Dual_Enrollment.pdf

[21] Katherine L. Hughes, et.al. *Pathways to College Access and Success*, September 2005. U.S. Department of Education, Office of Vocational and Adult Education, Washington, D.C. http://www.ed.gov/about/offices/list/ovae/pi/cclo/cbtrans/finalreport.doc

[22] Christensen, Clayton M., Michael B. Horn and Curtis W. Johnson. *Disrupting Class: How Disruptive Innovation Will Change the Way the World Learns* (McGraw Hill, 2008).