

MAXIMS OF ACHIEVEMENT AND GROWTH

“Throughout the centuries there were men [and women] who took first steps down new roads armed with nothing but their own vision.”

— Ayn Rand

Birth to Kindergarten

- Maxim 1. Babies are born learning. Within hours of birth, they begin to imitate the lip and tongue positions of their parents.
- Maxim 2. Babies, toddlers, and preschoolers learn best by imitation and gentle repetition. Hundreds of repetitions in a safe, supportive environment develop and strengthen networks of neurons which wire the young brain.
- Maxim 3. About 20% of children make only three years of language and math growth their first five years of life. They enter kindergarten with the skills of three-year-olds.
- Maxim 4. Another 20% of children make four years of language and math growth in their first five years. They enter kindergarten with skills typical of four-year-olds.

- Maxim 5. Other children make five to eight years of growth in language and math in their first five years. They enter kindergarten with skills typical of five-, six-, seven-, and eight-year-olds.
- Maxim 6. On the first day of kindergarten, the range between students in the bottom and top quartile midpoints is six years in reading skills and four years in math.

READY! for Kindergarten ®

- Maxim 7. Public schools do not create the achievement gap.
- Maxim 8. 100% of the achievement gap in reading and 67% of the gap in math originates in the home before a student's first day of kindergarten.
- Maxim 9. Creating widespread awareness of appropriate kindergarten and age-level targets among parents and child-care providers significantly increases the number of students entering kindergarten with grade-level skills.
- Maxim 10. Incoming kindergarten targets include recognizing 12 to 15 alphabet letters and their sounds, identifying beginning and ending sounds in words, counting to 20, knowing quantities to 10, mastering simple social skills like "settling in" to new groups, focusing on a task for five minutes, following three-part instructions, and coming to school bilingual if from a non-English-speaking home.
- Maxim 11. These targets can be achieved when parents read with their child 20 minutes a day from birth and spend five minutes a day playing simple age-appropriate activities.
- Maxim 12. Our data show that providing targets, tools, and training to parents and child-care providers can significantly decrease the number of students coming to kindergarten with skills below grade level.

- Maxim 13. Most school districts spend twice as much per child per year on students who need remediation. Catch-up growth in public schools is very expensive and historically unsuccessful. Fostering annual academic growth in emergent reading and math skills is five to ten times less expensive from birth to age five than in grades K-5.
- Maxim 14. Devising catch-up programs starting in kindergarten and continuing through 12th grade is a reactive strategy.

Annual Growth

- Maxim 15. All students need to make annual growth. Annual growth is a year's worth of progress for each year of instruction in core subjects each year.
- Maxim 16. Excellent initial teaching creates annual growth.
- Maxim 17. Annual growth is fairly uniform during elementary school.
- Maxim 18. Annual growth is less uniform in middle and high school. Only 62% of students make annual growth in math in grades 6-8.
- Maxim 19. A substantial portion of the flattened growth curves in middle school can be attributed to reduced numbers of students making annual growth.
- Maxim 20. Annual growth perpetuates the four-to-six-year range in incoming kindergarten achievement. Students who are in the first quartile of math are the exception to this maxim. First-quartile students fall a little further behind every year.

Catch-Up Growth

- Maxim 21. Students who are behind need to make catch-up growth. Catch-up growth is annual growth plus some additional part of a year's growth.

- Maxim 22. The primary burden of catching up the student shifts from the parent to the public school system when the student enters kindergarten.
- Maxim 23. When students leave kindergarten three years behind in reading, they must make two full years' growth plus annual growth in the first, second, and third grades to be at grade level by the end of third grade.
- Maxim 24. Trying to show system growth by making significant catch-up growth just before a high-profile assessment works only for the first year. Equal efforts the second year merely maintain the prior year's level of achievement but without any increase in system growth.
- Maxim 25. Student growth in a single year is often mistaken for system growth. System growth is measured by the difference between ending achievement at the same grade level between different years.
- Maxim 26. Catch-up growth is easiest to make early. It is easiest from birth to kindergarten. It is more difficult from kindergarten to third grade. It is more challenging still in middle school. It is hardest of all in high school.

Clear Goals

- Maxim 27. The 90% reading goal creates a clear line of sight between where each student and each elementary building is and where they need to go. It requires educators to catch-up students who are in the back of the academic pack.
- Maxim 28. The power of a 90% reading goal at third grade is that it focuses the elementary systems on delivering the single most crucial academic skill—reading—which is the foundation to lifelong learning.

- Maxim 29. Districts that do not or cannot teach 90% of their students to read at or above grade level by third grade will rarely achieve 95% reading and math goals in subsequent years.
- Maxim 30. No Child Left Behind legislation uses goals to drive nationwide, systemic change. NCLB has institutionalized minimum competency goals in reading and math and requires 95% of all students to reach them by 2013.
- Maxim 31. The 95% federal goals will have the same result that the 90% reading goal had in Kennewick if the district supports them.

Targeted Accelerated Growth

- Maxim 32. What works: instructional leadership, superb teaching, and excellent testing which assures annual growth and the four-phase TAG loop which assures catch-up growth: (1) diagnostic testing to identify sub-skill deficiencies, (2) proportional increases in direct instructional time, (3) teaching to the deficient sub-skill, and (4) retesting to be sure the skill has been learned.

Excellent Data Systems

- Maxim 33. An excellent data system is predicated upon an excellent assessment system.
- Maxim 34. An excellent assessment system measures growth and achievement by student, classroom, building, and district. Its reports are as accurate in low and high quartiles as for near grade level. Data is intelligible to students and parents. Scoring and reporting time occurs within a week.
- Maxim 35. Most tests are least accurate for the students who are furthest behind. Educators often have the poorest data for the students for whom they need the most precision.

- Maxim 36. A school district must assess at every grade level and in every subject for which it is unwilling to be data-blind.
- Maxim 37. Measuring annual and catch-up growth requires district-wide assessment in core subject areas in the spring of each year and often in the fall as well. An excellent assessment system can determine whether each student has made annual growth and/or the amount of targeted catch-up growth.
- Maxim 38. “Caterpillar” charts visually show the four- to six-year range in student achievement at each grade level.
- Maxim 39. Growth reports are the “new” kids on the block. The “Above and Below the Line” Reports highlight annual growth and catch-up growth. Time and Focus Reports and Principal Scheduling Reports highlight appropriate use of direct instructional time.
- Maxim 40. In the next decade, the primary users of data will be instructors, students, and parents.
- Maxim 41. Data do not use themselves and can sit unused in a perfectly good assessment system in a data-indifferent or a data-hostile school culture.
- Maxim 42. The numbers are what they are.
- Maxim 43. There is no point in testing if you don’t look at the data, don’t understand it, and don’t change.

Excellent Initial Instruction

- Maxim 44. School structure affects instruction. Elementary teachers have a primary responsibility to 25 students and 50 parents. Middle and high school teachers share responsibility for 150 students and, if they switch at the semester, for 300 students and 600 parents.

- Maxim 45. Rigor, engagement, lesson purpose, and results are hallmarks of excellent instruction.
- Maxim 46. Students learn more quickly with direct instruction than they do with seatwork, entry tasks, homework, and other teaching techniques involving non-eyeball-to-eyeball teaching or practice time.
- Maxim 47. Excellent instruction is increased when it is honored. Learning walks, instructional conferences, and split-screen videotaping of lessons celebrate the best practices.
- Maxim 48. Few districts can currently quantify the amount of growth that occurs annually in each classroom. Few districts can quantify at which quintile or quartile most growth occurs in a given classroom.
- Maxim 49. Elementary school teachers generally feel responsible to create growth in students. Middle and high school teachers are more likely to provide students with the opportunity to learn.
- Maxim 50. Students who move frequently and are English language learners are two groups that have the greatest difficulty meeting high standards. Highly mobile students spend substantially less time on task. English language learners must subtract the time it takes to learn English from time on task.

Diagnostic Testing

- Maxim 51. Diagnostic testing initially involves analyzing the sub-skill deficiencies of individual students from the district or state assessment data.
- Maxim 52. Sub-skills for reading include phonemic awareness, phonics, accuracy, fluency, and comprehension. Each sub-skill has sub-categories.

- Maxim 53. Sub-skills for math at the elementary level include addition, subtraction, and multiplication facts, one to one correspondence, counting, and sequencing.
- Maxim 54. Diagnostic testing is typically done more often and more effectively at the elementary than at the secondary level.
- Maxim 55. High performance schools embrace assessment, especially diagnostic testing. High performance schools test more frequently and more precisely than districts or states require.
- Maxim 56. Principals who deride assessment as a valid measure of growth to high standards typically support a building culture that perpetuates practices that are not working.

Proportional Increases in Direct Instructional Time

- Maxim 57. Most elementary reading blocks are 60-80 minutes long with 20-27 minutes of direct instruction per student. Most middle and high school periods are 45-55 minutes long.
- Maxim 58. Standard amounts of instructional time usually generate standard amounts of growth or annual growth across all quartiles.
- Maxim 59. When students start their educational marathon in kindergarten with a “six mile” difference between initial starting points and when each student runs a mile during the year, they will still be six miles apart at the end of the year. Kindergarten children who began the year with the entry skills of three-year-olds will have the skills of four-year-olds at the year’s end. Kindergarten children with the entry skills of five-year-olds will have skills of six-year-olds. They all make a year of growth but the six-year achievement gap will remain.
- Maxim 60. Catch-up growth is rarely achieved by pressuring students who are behind to “run faster” in the same amount of

time. Catch-up growth is typically achieved by allowing them to “run longer” and “run smarter,” i.e., dramatically increasing direct instructional time and using it wisely.

- Maxim 61. The primary driver of catch-up growth is increased instructional time. This is true in math as well as reading.
- Maxim 62. Increases in instructional time should be proportional to the level of deficiency. Students who are three years behind need more minutes of direct instruction than students who are one year behind.
- Maxim 63. It is fairly simple to calculate how many additional semesters a student needs to catch up when administrators know the current percentile rank of the student and the percentile rank equivalent of the target the student needs to achieve.
- Maxim 64. On a national level, in elementary reading each 13 percentile points represents approximately one year of growth.
- Maxim 65. Students who are three years behind at the end of kindergarten may require 160 to 220 minutes of direct reading instructional time each day during first, second, and third grades to catch up by third grade.
- Maxim 66. Calculations of direct instructional time should not include practice time, silent sustained reading, spelling instruction or time spent reading in the content area.
- Maxim 67. The research shows that silent sustained reading improves the abilities of students who already read well but results in very little improvement for those who don't read at grade level.
- Maxim 68. Parents who read 20 minutes a day with their child provide significant support to the direct instruction he or she receives at school.

- Maxim 69. By focusing on scheduling, building principals can double or triple the amount of direct instructional time for students who need targeted instruction in a single semester.
- Maxim 70. Doubling instructional effectiveness generally requires several years of staff training and experience.
- Maxim 71. Elementary and secondary principals are primarily responsible for scheduling proportional increases in instruction time for students who are behind.
- Maxim 72. Elementary schools are typically more flexible than middle schools. Elementary schools generally develop five or six tailored programs to increase catch-up minutes for students. Elementary schools are smaller, nimbler, and usually function better as teams.
- Maxim 73. Middle and high schools are run from equal time-based master schedules. Middle and high school administrators understand increased instructional time in terms of additional classes.
- Maxim 74. The implicit assumption of most master schedules is that students who are the furthest behind learn faster than students who are ahead. That is, students who are three years behind in reading or math will catch up to other students with the same amount of time on task.
- Maxim 75. The implicit assumption of uniform master schedules is wrong. Students who are behind do not learn at faster rates than students who are ahead. They require additional time and direct instruction tailored to their deficient sub-skills.
- Maxim 76. Low-performing schools are more resistant to increasing instructional time. They require more encouragement from the board and superintendent to increase instructional time at low-performing schools than at high-performing schools. This resistance could stem from leadership, entrenched refusal to change, disregard of the data, or apathy.

- Maxim 77. Monitoring whether principals actually schedule lagging (low quartile) students for additional classes or time is the first step in assuring proportional increases in instruction.
- Maxim 78. Superintendents and boards can use principal scheduling reports to create accountability for scheduling proportional catch-up time and classes.

Teaching to the Deficient Sub-Skill and Retesting

- Maxim 79. Merely allocating additional time does not mean that it will be spent on the deficient sub-skill.
- Maxim 80. Just because diagnostic testing occurs does not mean that instruction will be directed to the deficient sub-skill.
- Maxim 81. Directing instruction to the deficient sub-skill is fundamentally different than reteaching the morning's lesson.
- Maxim 82. Teaching to the deficient sub-skill requires nimbleness, flexibility, and a high level of ability to adapt material (or create it, if necessary) for the targeted student.
- Maxim 83. The catch-up process that we learned working with K-3 in reading and math will work at middle and high school as well

Good to Great

- Maxim 84. Deciding to teach 90% to 95% of students to read at grade level by third grade is "like a single, clear, perfectly struck note hanging in the air in the hushed silence." It is the perfect "hedgehog" strategy for U.S. elementary schools and absolutely essential in every great district.¹
- Maxim 85. We like to think we follow our beliefs. In reality, our

¹Jim Collins, *Good to Great* (New York: Harper Business, 2001), 116.

beliefs follow our experience. Until you change your behavior, you cannot really change deep, embedded beliefs.

Maxim 86. “You must never confuse faith that you will prevail in the end—which you can never afford to lose—with the discipline to confront the most brutal facts of your current reality.”²

Maxim 87. We had thought it was a matter of doing more of what we were already doing. We had to recognize that we simply didn’t know how to teach 90% of our students to read to standard by third grade.

Maxim 88. It may take a decade for your district to learn how to teach 95% of students to read and do math at grade-level.

Maxim 89. “We will find a way or we will make a way.”³

Here to Stay

Maxim 90. We are in the middle of the third educational reform in a century.

Maxim 91. The social, economic, and political forces that passed minimum standard reform legislation in 50 states, and at the federal level thereafter, not only will persist but will grow stronger.

Maxim 92. Efforts expended to defeat the standards may ease the burden on adult educators but increase the economic and social burden of students who do not reach reasonable minimum competency levels.

Maxim 93. When public services like police protection and public education fail, the burden is disproportionately borne by the poor who cannot compensate with gated communities and private academies. The only hope for the poor is that we in public education deliver on our promise.

²Ibid., 85, quoting Admiral Jim Stockdale, the highest ranking U.S. officer captured and tortured in Vietnam.

³Attributed to the military leader Hannibal on his decision to cross the Alps.