



# Reading Between the Lines:

## What the ACT Reveals About College Readiness in Reading

### Executive Summary

**Based on 2005 ACT-tested high school graduates, it appears that only about half of our nation's ACT-tested high school students are ready for college-level reading.** What's worse, more students are on track to being ready for college-level reading in eighth and tenth grade than are actually ready by the time they reach twelfth grade.

College readiness—the level of preparation students need in order to be ready to enroll and succeed without remediation in credit-bearing entry-level coursework at a two- or four-year institution, trade school, or technical school—is currently inadequate and should be an expectation for all high school students.

It is also recognized today that the knowledge and skills needed for college are equivalent to those needed in the workplace (American Diploma Project, 2004; Barth, 2003). We and others have documented that improving college and workforce readiness is critical to developing a diverse and talented labor force that will help ensure our nation's economic competitiveness in a growing global economy (Callan & Finney, 2003; Cohen, 2002; Somerville & Yi, 2002).

Reading is an essential component of college and workplace readiness. Low literacy levels often prevent students from mastering other subjects (Alliance for Excellent Education, 2002). Poor readers struggle to learn in text-heavy courses and are frequently blocked from taking academically more challenging courses (Au, 2000).

Much has been written about the literacy problem in U.S. high schools. Approximately six million of the nation's secondary school students are reading well below grade level (Alliance for Excellent Education, 2002, 2003). More than 3,000 students drop out of high school every day (Alliance for Excellent Education, 2003), and one of the most commonly cited reasons for the dropout rate is that students do not have the literacy skills to keep up with the curriculum (Kamil, 2003; Snow & Biancarosa, 2003).

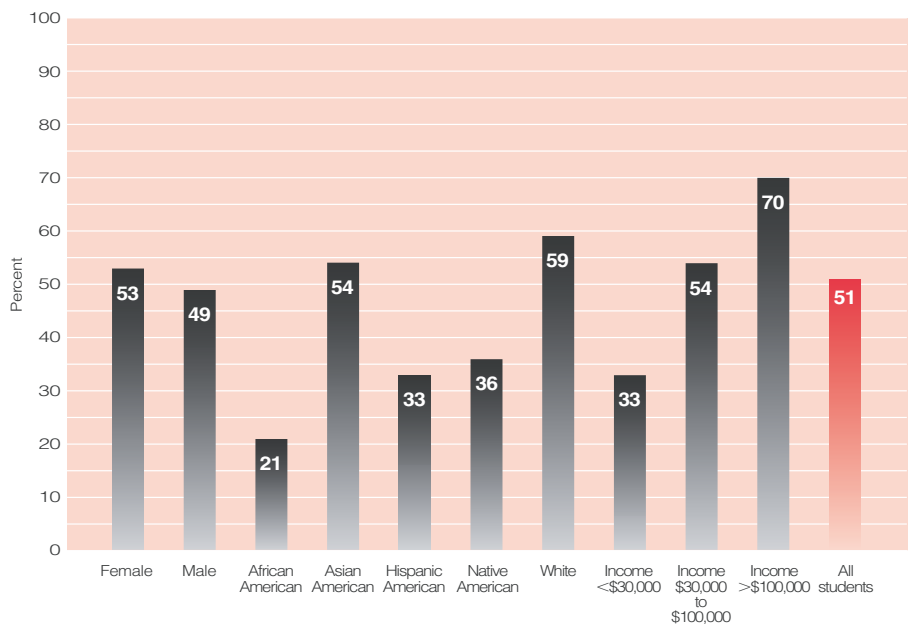
Students at the college level are not faring much better. Eleven percent of entering postsecondary school students are enrolled in remedial reading coursework (National Center for Education Statistics, 2003). Seventy percent of students who took one or more remedial reading courses do not attain a college degree or certificate within eight years of enrollment (Adelman, 2004).

According to Greene (2000), the shortage of basic literacy skills costs U.S. businesses, universities, and underprepared high school graduates as much as \$16 billion per year in decreased productivity and remedial costs.

ACT data suggest that the nation’s high school students are not ready for college-level reading. But ACT data also show that, while it is important for students to be able to comprehend both explicit and implicit material in texts, as well as to understand how various textual elements (such as main ideas, relationships, or generalizations) function in a text, **the clearest differentiator in reading between students who are college ready and students who are not is the ability to comprehend complex texts.** These results are summarized below and are followed by recommended action steps that policymakers and educators can take to help all students read at the level of proficiency necessary to ensure that they are ready to succeed in college without remediation.

1. **Only 51 percent of 2005 ACT-tested high school graduates are ready for college-level reading—and, what’s worse, more students are on track to being ready for college-level reading in eighth and tenth grade than are actually ready by the time they reach twelfth grade.**
  - **Just over half of our students are able to meet the demands of college-level reading, based on ACT’s national readiness indicator.** Only 51 percent of ACT-tested high school graduates met ACT’s College Readiness Benchmark for Reading, demonstrating their readiness to handle the reading requirements for typical credit-bearing first-year college coursework, based on the 2004–2005 results of the ACT. ACT’s College Readiness Benchmark for Reading represents the level of achievement required for students to have a high probability of success (a 75 percent chance of earning a course grade of C or better, a 50 percent chance of earning a B or better) in such college courses as Psychology or U.S. History—first-year courses generally considered to be typically reading dependent.
  - **Unfortunately, the percentage of students who are ready for college-level reading is substantially smaller in some groups.** As shown in the figure below, male students, African American students, Hispanic American students, Native American students, and students from families whose yearly income is below \$30,000 are less likely than the ACT-tested population as a whole to be ready for college-level reading—in some instances, as much as one and a half to two and a half times less.

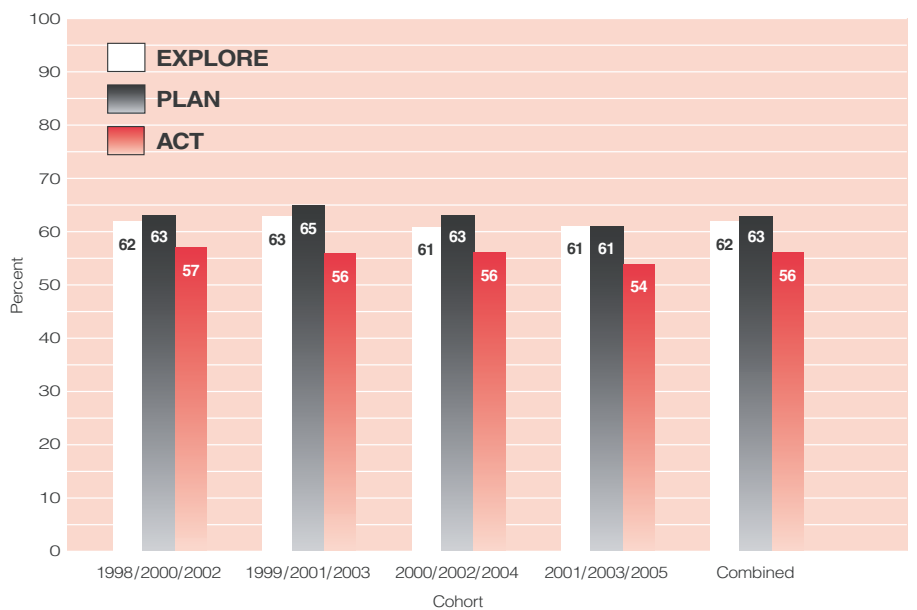
*2005 ACT-tested High School Graduates Meeting ACT College Readiness Benchmark for Reading*



■ **Student readiness for college-level reading is at its lowest point in more than a decade.** From 1994 through 1999, the readiness of ACT-tested students for college-level reading steadily increased, peaking at 55 percent. Since 1999, readiness has declined—the current figure of 51 percent is the lowest of the past twelve years. With a few variations, the same general pattern over time of increase followed by decline holds for both genders and nearly all racial/ethnic groups. Only the readiness of Asian American students, Native American students, and white students has experienced some net increase since 1994, while the readiness of female students returned to its 1994 level after peaking in 1999.

■ **More eighth- and tenth-graders are on track to being ready for college-level reading than are actually ready when they graduate from high school.** ACT has developed College Readiness Benchmarks for the eighth- and tenth-grade components of its early college readiness preparation system, EPAS™ (which includes EXPLORE®, PLAN®, and the ACT). These Benchmarks are based on the College Readiness Benchmarks for the ACT, adjusted to reflect expected growth between eighth and tenth grades and between tenth and twelfth grades. The figure below shows that, in a combined testing population of four recent cohorts of students who participated in all three EPAS programs, 62 percent of eighth-grade students are on track to being ready for college-level reading by the time they graduate from high school. The percentage of these same students who are on track to being ready increases slightly when they reach the tenth grade. However, by the time they take the ACT, a smaller percentage of these same students are actually college ready in reading. Similar patterns were seen in the four individual cohorts and by gender, race/ethnicity, and annual family income level.

*EXPLORE-, PLAN-, and ACT-tested Students Meeting Reading Benchmarks, 1998–2002 to 2001–2005*



■ **State standards in high school reading are insufficient—or nonexistent.** Why are students losing momentum in high school? One reason may be that they are not being asked to meet specific, rigorous reading standards during their high school years—a time when it is crucial for them to continue refining their reading skills. Our research indicates that 28 of the 49 states with standards—more than half—fully define grade-level standards in reading only through the eighth grade.

- At the high school level, 20 of these 28 states specify only a single group of reading standards intended to cover grades 9 through 12, standards that do not recognize expectations for increasing proficiency in reading during those years.
- Six additional states specify standards for only one, two, or three high school grades, ignoring the other grades altogether.
- Two additional states specify just one set of standards for a subset of grades.

Overall (including Iowa, which has not identified state standards), nearly *60 percent*–29 states—do not have grade-specific standards that define the expectations for reading achievement in high school. If such standards don't exist, teachers can't teach to them and students can't learn them. You can't get what you don't ask for.

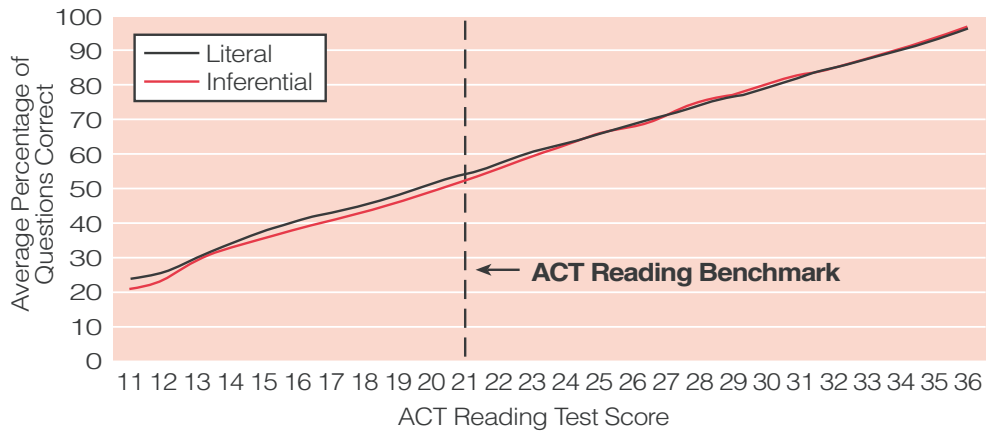
- **Not enough high school teachers are teaching reading skills or strategies and many students are victims of teachers' low expectations.** Another likely reason that high school students are losing momentum in readiness for college-level reading is that reading is simply not taught much, if at all, during the high school years, not even in English courses (Ericson, 2001; Meltzer, 2002). But even where reading is an element of the high school curriculum—usually as part of English or social studies courses—ACT research suggests that low teacher expectations can prevent some students from being taught the reading skills they need for college and work. According to data gathered by ACT as part of its 2002–2003 National Curriculum Survey<sup>®</sup>, if teachers perceived students to be primarily college bound, they were more likely to focus their instruction on higher-level critical reading skills. If they perceived students not to be college bound, they were less likely to teach these critical reading skills. These practices are simply not acceptable.
- **Beyond-core coursework in social studies only slightly improves ACT Reading Test score.** ACT research has well documented the strong positive impact of taking rigorous courses in high school, particularly in English, mathematics, and science (ACT, Inc., 2004). According to 2005 data, students who take additional, beyond-core science courses (i.e., Physics) earn ACT Science Test scores that are up to 3 points higher, on average, than the scores of students who take only the core science curriculum. In mathematics, students who take additional courses (i.e., advanced math beyond Algebra II) have ACT Mathematics Test scores that are up to 6.8 points higher, on average, than the scores of students who take only the core mathematics curriculum. These increases are on a score scale ranging from 1 to 36 and represent statistically significant gains. However, additional coursework in social studies—the high school subject area that overlaps most closely with the kinds of college social sciences courses used to establish the ACT College Readiness Benchmark for Reading—results in an average ACT Reading Test score no more than 1 point higher than that associated with the recommended three years of social studies. And this includes even those students who took the equivalent of five years of social studies in high school.

This suggests that taking additional years of social studies coursework alone does not have a large differential impact on the readiness of ACT-tested students to handle the level of reading required in college social sciences courses. However, what appears to matter in readiness for college-level reading is not the *number* of courses students take, but what is being asked of students in these courses. We examined student performance on the ACT Reading Test from a number of perspectives in an attempt to answer the question of what *really* matters in reading.

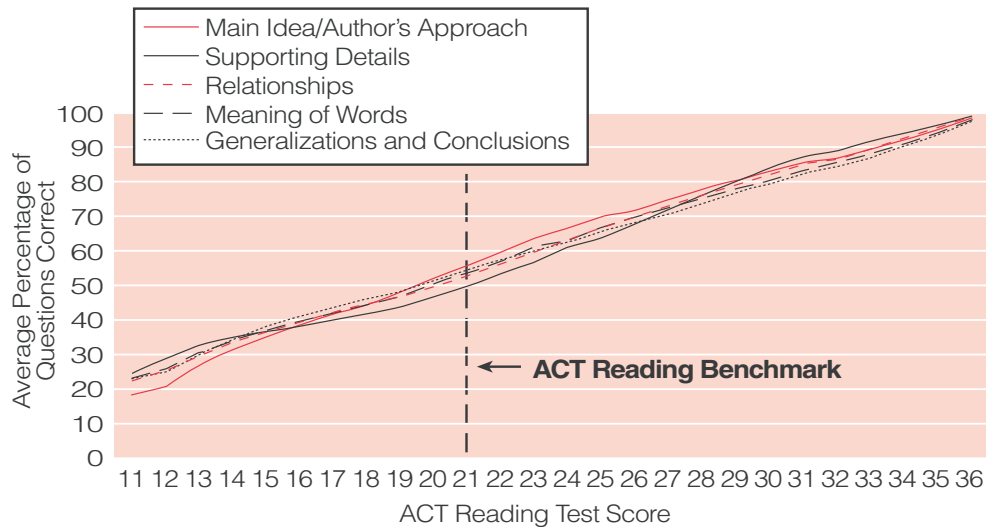
2. Those ACT-tested students who can read *complex* texts are more likely to be ready for college. Those who cannot read complex texts are less likely to be ready for college.

■ **Performance on two main aspects of Reading Test content does not differentiate students who meet the Reading Benchmark from those who do not.** Questions on the Reading Test assess two levels of comprehension (literal and inferential) and focus on five kinds of textual elements (main idea or author’s approach; supporting details; sequential, comparative, or cause-and-effect relationships; meaning of words; and generalizations and conclusions). The following figures present the results of the analyses by comprehension level and textual element.

*Performance on the ACT Reading Test by Comprehension Level  
(Averaged across Seven Forms)*



*Performance on the ACT Reading Test by Textual Element  
(Averaged across Seven Forms)*

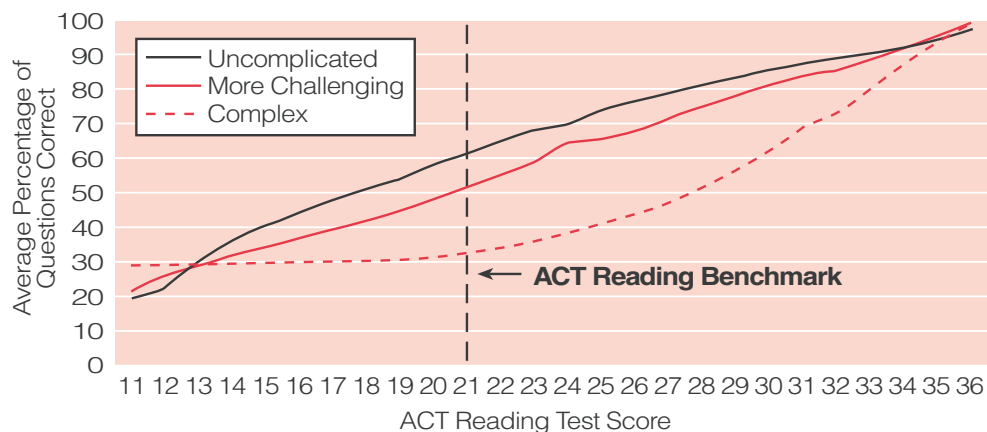


These analyses show essentially no difference in student performance across the score range, either above or below the Reading Benchmark. At each score point, the percentages of literal and inferential comprehension questions, or questions based on the five kinds of textual elements, answered correctly are virtually identical. What's

more, both above and below the Benchmark, improvement in performance is uniform and gradual—that is, as performance on one level increases, so does performance on the others, and to almost exactly the same degree. Certainly, increased proficiency in these skills is helpful to all students, but given these steadily increasing linear relationships between ACT Reading Test score and reading proficiency, there is no clear differentiator here between those students who are ready for college-level reading and those who are not.

- **Performance on complex texts is the clearest differentiator in reading between students who are more likely to be ready for college and those who are less likely to be ready.** Texts used in the ACT Reading Test reflect three degrees of complexity: uncomplicated, more challenging, and complex. The results of the analysis by degree of text complexity are presented below.

*Performance on the ACT Reading Test by Degree of Text Complexity  
(Averaged across Seven Forms)*



In this figure, performance on questions associated with uncomplicated and more challenging texts both above and below the ACT College Readiness Benchmark for Reading follows a pattern similar to those in the previous analyses. Improvement on each of the two kinds of questions is gradual and fairly uniform.

But when we look at performance on questions associated with complex texts, we see a substantially different pattern. Below the Reading Benchmark, the percentage of questions answered correctly remains virtually constant—and not much higher than the level suggested by chance (25 percent, given that each question contains four answer choices). Most importantly, above the Reading Benchmark performance improves more steeply than it does with either of the other two levels of text complexity, indicating that students who can master the skills necessary to read and understand complex texts are more likely to be college ready than those who cannot. It is not until the uppermost end of the score scale that student performance on questions associated with all three degrees of text complexity is roughly the same.

What does this mean? For one thing, it shows that degree of text complexity differentiates student performance better than either the comprehension level or the kind of textual element tested. But another, more important, conclusion is that, because of its distinct pattern of performance increases relative to the ACT College Readiness Benchmark, *performance on complex texts is the clearest differentiator in reading between students who are likely to be ready for college and those who are not.* And this is true for both genders, all racial/ethnic groups, and all annual family income levels.

A complex text can be described with respect to the following six aspects (which can be abbreviated to “RSVP”):

- **Relationships:** Interactions among ideas or characters in the text are subtle, involved, or deeply embedded.
- **Richness:** The text possesses a sizable amount of highly sophisticated information conveyed through data or literary devices.
- **Structure:** The text is organized in ways that are elaborate and sometimes unconventional.
- **Style:** The author’s tone and use of language are often intricate.
- **Vocabulary:** The author’s choice of words is demanding and highly context dependent.
- **Purpose:** The author’s intent in writing the text is implicit and sometimes ambiguous.

- **State standards do not address text complexity.** Although 10 of the 49 states with standards provide names of works or authors that could be used as indices of the complexity of recommended high school reading material, *none* of the state standards attempts to define explicitly the degree of complexity a specific grade-level text should have. Relationships, Richness, Structure, Style, Vocabulary, Purpose—none of these “RSVP” aspects is described in detail anywhere in any state’s reading standards. So, just as with grade-specific state reading standards, when it comes to defining and requiring certain specific levels of complexity in students’ high school reading materials, we’re getting what we’re asking for. And students’ college and workplace readiness is the worse for it.

**3. We can no longer afford to ignore reading instruction in high school. Something must be done to improve the reading proficiency of all students.**

- **Strengthen reading instruction in *all* high school courses by incorporating complex reading materials into course content.** The type of text to which students are exposed in high school has a significant impact on their readiness for college-level reading. Specifically, students need to be able to read complex texts if they are to be ready for college. All courses in high school, not just English and social studies but mathematics and science as well, must challenge students to read and understand complex texts. In most cases, a complex text will contain multiple layers of meaning, not all of which will be immediately apparent to students upon a single superficial reading. Rather, such texts require students to work at unlocking meaning by calling upon sophisticated reading comprehension skills and strategies.

Certainly, students will need to make the effort, both inside and outside of school, to enhance their comprehension of complex texts. But in a nation where 13- and 17-year-olds have increasingly less exposure to or interaction with books outside of the classroom, high schools must still play the primary role in providing students with the kinds of complex reading materials and experiences they need in order to be college and work ready and must continue to teach and reinforce reading strategies that deal with increasingly more complex reading tasks.

Students must have the opportunity to improve their reading skills and strategies at a time when they need to build upon the foundational skills in reading that they developed when they entered high school. They must be given more opportunities to

read challenging materials across the curriculum so that they are better positioned to comprehend complex texts in all subjects once they enter college or the workplace.

- **Revise state standards so that they both explicitly define reading expectations across the high school curriculum and incorporate increasingly complex texts into the English, mathematics, science, and social studies courses in grades 9 through 12.** Without specific reading standards across the curriculum, teachers cannot be expected to know what level of reading proficiency students should be expected to attain or what degree of text complexity is appropriate in each subject and grade. Reading standards that address text complexity should be embedded in English, mathematics, science, and social studies standards.
- **Make targeted interventions to help students who have fallen behind in their reading skills.** As we strengthen high school courses and state standards with respect to text complexity, we must also address the reading skills of those students who begin high school with reading deficiencies. Such deficiencies need to be diagnosed much earlier, in upper elementary and middle school, so that earlier interventions can be made. If a greater number of students can be identified and helped before they reach high school, they will be more likely to have developed the necessary foundational reading skills upon which college-ready skills can be based.
- **Provide high school teachers with guidance and support to strengthen reading instruction and to incorporate the kinds of complex texts that are most likely to increase students' readiness for college-level reading.** Teachers need the support and professional development opportunities necessary to ensure that they understand the types of reading skills students need to have by the time they graduate from high school.
- **Strengthen high school assessments so that they align with improved state standards and high school instruction across the curriculum.** As we strengthen the high school curriculum by incorporating complex reading materials into all courses as defined by improved state standards, so must we also reflect this greater degree of complexity in the high-stakes assessments that high school students take. These assessments need to reflect a wider range of reading materials by including complex texts in all subject areas.

## Action Steps

### *What Can Policymakers Do?*

- Consistent with the National Governors Association's recommendation that comprehensive literacy plans be developed in each state (NGA Center for Best Practices, 2005), incorporate reading expectations into state standards across the curriculum so that they specify the inclusion, by grade level, of increasingly complex reading materials in English, mathematics, science, and social studies.
- Build support for a legislative focus on improving reading achievement in middle school and high school.
- Encourage local efforts to improve reading achievement at the school and district levels.
- Disseminate best practices found in middle schools and high schools that are achieving results and promote similar efforts on a wider scale.
- Increase funding for school or district programs that improve middle school and high school reading achievement.



- Provide resources for professional development opportunities for teachers so that they are equipped to provide the necessary reading instruction in their subject areas and grade levels.
- Make provisions both for assessing students' college readiness in reading to evaluate their progress and for making timely interventions when they encounter difficulties.

### ***What Can Educators Do?***

- Consistent with the National Governors Association's recommendation that schools and districts develop comprehensive literary plans, incorporate reading expectations into state standards across the curriculum so that they specify the inclusion, by grade level, of increasingly complex reading materials in English, mathematics, science, and social studies.
- Diagnose reading deficiencies and intervene earlier, before high school.
- Incorporate complex reading materials into all high school courses, not just English and social studies, to strengthen students' reading skills throughout high school.
- Require all teachers in all courses to teach reading strategies so that students are able to progress from comprehension of simpler texts to comprehension of more complex texts.
- Push students to read texts that are personally challenging, and support their efforts by giving them a variety of critical reading strategies to use.
- Systematically assess students' college readiness in reading to evaluate their progress and make timely interventions when they encounter difficulties.

These are important and far-reaching missions that no one group of concerned individuals can accomplish alone. Teachers, school administrators, and policymakers have crucial roles to play. If we help all students to become better readers, they can become ready to succeed in college and work. It's a difficult goal, but a worthy one. And with greater effort on all our parts, it's a goal we can achieve.

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