THE MAIN IDEA
current education book summaries

Hidden Potential
The Science of Achieving Greater Things

By Adam Grant (Penguin Random House, 2023)

S.O.S. (A Summary of the Summary)

The main ideas of the book:

~ Everyone has hidden potential for growth and achievement, but standard approaches to studying, practicing, coaching, and organizing education often leave this potential untapped.

~ The practices of high-achieving individuals (and a high-achieving school system) reveal the surprising skills, scaffolds, and systems that unlock potential. Even better, anyone can learn them, and anyone can teach them, too.

Why I chose this book:

More than a decade ago, Carol Dweck introduced educators to the benefits of the growth mindset. But in more recent years, Dweck herself has demonstrated that the growth mindset *alone* does little good without the right scaffolding to support it. A study of 15,000 high schoolers revealed that nurturing students' growth mindsets only boosted their grades when their teachers recognized their potential, and their school environments encouraged them to embrace challenge. This is critical information for educators. Even with the right mindset, our students' potential may remain locked up, barricaded by ineffective approaches and unproductive systems.

Organizational psychologist, Adam Grant, offers us the keys: the skills of character we need to teach our students, the best scaffolds educators can provide, and the larger-scale systems that set everyone free to achieve and succeed. I was personally surprised at some of the methods Grant's research found to be most effective. They are far from the same old recommendations we've all heard before. But I think you'll also find that while they are "outside the box," they feel practical and doable. Read on, ready to think differently and discover new keys to achievement.

The Scoop (In this summary you will learn…)

✓ The skills students need, the scaffolds teachers can use, and the systems schools can implement to increase achievement

✓ What works better than willpower for getting through "boring stuff"

✓ A proven "hack" for improving the performance of the least effective teachers and the lowest achieving students

✓ One simple schedule change shown to increase student learning and reduce teacher burnout

✓ A research-backed, low-effort approach to improving students' reading achievement

✓ The Main Idea's suggestions for professional learning to unlock students' potential

Click here for my accompanying podcast chat about the book and html link of the summary

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In 1991, Kasaun Henry, a public-school kid who had learned chess by playing with a drug dealer in a Harlem park, defeated a top-ranked player from an elite private school and led his team to the National Junior High Chess Championship.

This might sound like the story of a chess prodigy or someone who just had a natural gift, but Kasaun Henry was one of a championship *team,* the Raging Rooks, whose members all came from the same public school in the same poor neighborhood, and who were taught by a coach determined to unlock the hidden potential in all the kids who showed up to learn.

People who appear to be naturals, whether in chess, music, sports, academics, or art, most likely benefitted from a particular kind of coach, teacher, or parent. Fortunately for those of us educators who aspire to help students achieve more, there are specific things we can do to unleash higher achievement in almost any skill. Over the past decade or so there's been increased awareness of the importance of having a growth mindset, but success comes from more than just a mindset; it comes from a set of *skills*.

Surprisingly, the skills needed for high achievement are not *cognitive* but *character skills.* A powerful Tennessee experiment showed that *who* taught students in kindergarten impacted their success 4, 8, and even 20 years later. The students who had the strongest kindergarten teachers even earned *more money* as adults! And it wasn't because those teachers gave their students a boost in reading and math. It was because of the *character skills* they taught them, primarily these three:

- • **Determination:** *persisting in the face of obstacles, taking on challenging work*
- • **Proactivity:** *taking initiative to engage in learning, seek information, and solicit feedback*
- • **Discipline:** *staying focused, resisting impulse and distraction*

The students who were rated higher than their peers on these three *character skills* by both their 4th and later their 8th grade teachers were the ones who had the strongest kindergarten teachers and the ones who ended up becoming more successful adults. That is to say, effective instruction in these three character skills is more impactful than early instruction in math and reading. And the character skills weren't *traits* the students were born with, but *skills* they'd learned and retained.

Character skills have a greater impact on achievement than do cognitive skills. And character skills are *learned* (not innate).

A study of adult entrepreneurs had similar results. Training in *character skills* (determination, proactivity, and discipline) was three times as effective at improving business outcomes than was training in business skills (like finance, accounting, and marketing). So, it isn't the case that these character skills must be taught in some early window when children are young. Effective character-skills instruction is highly impactful *at any age.*

Importantly, the study of adult entrepreneurs did not just have the participants take in information (for example, listening to lectures about character skills) but it also had them practice putting those skills into action. Presumably, the same was true when the character skills were taught in kindergarten classes. Experienced teachers don't just *tell* five-year-olds to "be disciplined" but teach them what it looks like and give them plenty of practice.

It's the practice and real-life application of character skills that moves learners beyond platitudes like "never give up" that we've seen on cat posters most of our lives. There's more to having strong character than just *knowing* what to do. Adam Grant defines *character* as the learned capacity to *live by* your principles, especially when the going gets tough. Learning character skills requires *practice.*

This summary of *Hidden Potential* is divided into three sections, each of which introduces a key to unlock higher achievement:

Part I explores the three character *skills* individuals need to attain higher achievement.
Part II explains how to put *scaffolds* in place to sustain motivation and to overcome obstacles.
Part III spotlights how we can build *systems* that expand opportunity and equip everyone to unlock their potential.

Character skills, scaffolding, and equitable systems are a set of keys that educators, like the coach of the Raging Rooks, can offer to students to unlock their hidden potential. Read the summary below to see how schools can adapt the ideas in this book.

In his research, Adam Grant identified three specific character skills that accelerate achievement: **determination**, **proactivity**, and **discipline**. But as powerful as they are, these skills will lose their impact if they're just printed on a poster but never applied in practice. Read on to discover how to *apply* each of the character skills most productively to power up learning.

1st Character Skill: DETERMINATION

Polyglots, those rare individuals who can speak lots of languages and acquire new languages quickly, seem like perfect examples of people who just "have a gift." To those of us who took four years of high school French and can't quite remember how to ask where the bathroom is, a person who can carry on a conversation in ten different languages seems like they must possess a different kind of brain. But they don't. What they have is the **determination** to continue to move forward despite mistakes and discomfort.

The polyglots Adam Grant spoke to for his research explained an approach that enabled them to acquire languages quickly. It didn't involve textbooks or flashcards or vocab lists. Their approach was this: they started speaking the new language right away. And they kept at it, no matter how awkward or embarrassing, and no matter how many mistakes they made. In other words. it was all about determination—one of the three character skills that can super-charge achievement.

It takes determination (and courage, too) to get outside of your comfort zone and start speaking aloud in a new language. What if you ask for directions to the rooster station instead of the bathroom? But making mistakes, lots of them, even the embarrassing ones, is the best way to learn a language. Studying flashcards alone in your room until you're sure you can speak perfectly is not. It takes determination to keep on striking up conversations even after you've embarrassed yourself a few times.

The most powerful way to practice determination: *seek out discomfort.*

Face the discomfort. Walk straight into it. Abandon methods that feel safe and easy (like flashcards) and embrace jumping into the ring before you're completely prepared. Make mistakes—the more the better. To accelerate growth, find and stay in your *dis*comfort zone. One of the ployglots Grant spoke to who initially struggled to learn languages, purposely set out to make 200 mistakes a day, "The best cure to feeling uncomfortable about making mistakes is to *make more mistakes*." Imagine if the teachers in our schools conveyed this same message to their students?!

In fact, we do the complete opposite in American schools, and this is a problem. We send the message that students shouldn't be struggling, and if they are, we should just change our teaching to better match their learning style. But research not only shows that learning styles are a myth but also that students sometimes learn *more* when they experience struggle and discomfort.

Consider the example of Steve Martin. You might think he's a naturally gifted comedian, but when he was young, he initially got few laughs. So, what did he do? He absolutely hated writing but decided to lean into that discomfort and started to write his own jokes. Once he did that, his career as a comedian really took off. As Ted Lasso said, "If you're comfortable, you're doin' it wrong."

We may think of learning as a process of identifying, fixing, and preventing mistakes. But we've got it all wrong. We need to encourage our students (and ourselves) to make *more* mistakes. If we wait until we're comfortable and mistake-free before practicing a new skill, we won't grow and learn as much. As Grant writes, "Comfort in learning is a paradox. You can't become truly comfortable with a skill until you've practiced it enough to master it. But practicing it *before* you master it is uncomfortable…" In other words, you need to do what's uncomfortable in order to eventually get comfortable.

If we want our students to keep trying even when they do *not instantly* learn a new skill, we need to do more than tell them it's okay to make mistakes. We need to encourage them to actively *seek out* discomfort. This type of determination is one of the keys to accelerated learning and achievement. Whether it's writing a joke or speaking aloud on the first day of Spanish class, being determined to do (and keep doing) the thing that's not comfortable will lead to the most learning.

2nd Character Skill: PROACTIVITY

In addition to being **determined**, the second key character skill that leads to higher achievement is being **proactive**. Most people can agree it's a good approach to learning. We sometimes call it taking initiative or being self-motivated. Whether we consciously practice it, or directly teach it, we want **proactivity** for our students, and we aim for it ourselves.

The difference between being *pro*active and bring *re*active is stark when it comes to learning. Someone who is reactive responds to whatever comes at them. The information they get is whatever someone else chooses to tell them. The problems they solve are the ones someone else dumps on them. Someone who is being a proactive learner, on the other hand, seeks out new information. They ask questions. They ask for advice. They find books and contact experts. They notice problems and then figure out how to solve them.

World champion javelin thrower, Julius Yego, exemplifies the character skill of proactivity. From a rural village in Kenya, he lacked access to the kinds of facilities, equipment, and coaching other athletes relied on. When asked who coached him, he said "YouTube." Determined to improve, Yego watched YouTube videos of top javelin throwers, studied what he saw, and trained himself.

One way that proactivity helps you learn and achieve is when you actively *seek out feedback*. When Adam Grant, sought to improve his public speaking, he asked for feedback from the students in classes where he delivered guest lectures. Upon receiving the feedback, he found some of it was easy to absorb, like *"Interesting content!"* However, he was tempted to discard comments like *"Your nervous breathing sounds like Darth Vader."* For feedback to be useful, however, we need a growth-driven approach to it.

How can we use the feedback to learn and grow? Take a look at the chart below and see if your approach to seeking out information to learn and grow is more like a **rubber ball, clay, Teflon,** or a **sea sponge:**

How are You Learning?

Reactive and Ego-Driven	Reactive and Growth-Driven
Absorbs only what others or the environment offer and filters out anything that doesn't make them feel good about themselves. Like a **rubber ball,** they bounce from one idea or task to the next but retain their shape, not growing or changing based on what they learn.	Absorbs only what others or the environment offers and allows themselves to be shaped by it. Like **clay**, they can be formed and reformed by others. They're teachable and coachable but also susceptible to negative influences. They don't own their own growth.
Proactive and Ego-Driven	**Proactive and Growth-Driven**
Searches the environment for needed information and expert advice but filters out anything that doesn't make them feel good about themselves. They may learn certain kinds of information, but they don't grow. Like **Teflon,** nothing sticks.	Searches the environment for needed information and expert advice and allows themselves to be shaped by it. Like a **sea sponge**, they filter to find what is useful and nutritious. They take in what fuels their growth.

The most powerful way to practice proactivity: *be growth-driven* like a sea sponge.

So how can we guide students (and ourselves) to be like **sea sponges** who are proactive and growth-driven?

One simple trick when seeking input from others is to ask for "advice" rather than feedback. Advice tends to be future-oriented (what you could improve for next time) rather than a response to what's passed (what was good or bad about the work you've already completed). Try asking, "What's one thing I can do better?" This will help to get you future-oriented advice like "Maybe include some personal anecdotes in your next speech" which will help you grow more than feedback like "Your speech was boring." And friends or colleagues who are too nice to say, "Your speech was boring," might be willing to give you advice for livening things up in the future.

Another method is to look for advice-givers who are *caring, credible, and familiar* (with you). The best advice will come from someone who *cares* about you and your growth, not someone who marks "excellent" on every line of the survey just to get it over with. You also want a *credible* advice-giver who has some expertise to offer. You can safely write off driving advice from a ten-year-old. An adviser who's *familiar* with you will also tend to give better guidance than one who's not. Your own gymnastics coach can see how your form has improved since last the last meet in a way that a coach who didn't know you never could.

We know this well in education. James Comer said that "No significant learning can occur without a significant relationship," and Grant solidifies this message here. Clearly, we need to emphasize the importance of teachers developing caring, credible, and familiar relationships with students so they can tap into their hidden potential and unleash greater achievement.

3ʳᵈ Character Skill: DISCIPLINE

Along with **determination** and **proactivity**, the third character skill that powers growth is **discipline**. Discipline is all about focus. Picture the runner, training for a marathon, out at dawn logging miles no matter the weather. Or an employee working toward a promotion, arriving early, staying late, and never dropping the ball on an important project.

They're focused. They've chosen a goal or a priority and are using **discipline** to give it all their attention and effort.

The opposite of discipline is lack of focus. And sometimes even the hardest workers lack focus in a surprising way: they spread their focus too thin in pursuit of all-around perfection. But perfection is not a realistic goal. We can't prioritize it all. If you're training for a marathon by running each morning, then you can't also show up an hour early to work every day, too. Greater growth results when we choose what to prioritize, what to minimize, and we use discipline to stick to it.

The most powerful way to practice discipline: be *an imperfectionist.* Life is a balancing act in so many ways. Time spent doing one thing, is time *not* spent doing something else. Perfection achieved in one area, means letting things go elsewhere. There's no such thing as doing everything perfectly, and when we hold ourselves to that standard, we get in the way of growth. As Adam Grant puts it, "If perfectionism were a medication, the label would alert us to common side effects. *Warning: may cause stunted growth."*

But, doesn't perfectionism have positive benefits too? Nope. It doesn't. Do you know what the research shows is the average correlation between perfectionism and performance? Zero. Perfectionism is not something to encourage in our students or ourselves.

Three Things Perfectionists Get Wrong	
They Focus on the Wrong Things	They obsess about details that aren't that important or relentlessly pursue a solution to one problem while failing to notice other problems.
They Avoid Failure	Avoiding anything that might lead to failure is a recipe for avoiding growth. You can't get better if you never make mistakes.
They Respond Poorly to Mistakes	If they do make a mistake, they tend to berate themselves rather than seeking to learn from what they did wrong and improve their performance next time.

So how can we guide students to be **imperfectionists**? Just encourage them by saying "*do your best?"*

Though "*your* best" is less pressure, it still offers no guidance on where to focus your effort. *Every educator, coach, and parent should know that study after study has shown that people encouraged to "do their best" learn less and perform worse than those who are given a specific, challenging goal*. "Do your best," leaves learners floundering and directionless, while something like "Your goal is to stay in character even if someone flubs a line" sets a clear path forward.

Adam Grant recalls his own struggles with perfectionism as a diver in high school. When his coach asked him to try a new dive, he was frozen by his desire for perfection. He once went back and forth on the board for 45 minutes before making a single attempt.

His coach eventually helped him get out of his perfectionism trap by helping him set precise, high targets. If he was attempting a new dive, then any score above a zero would be considered a success at first (certainly more successful than pacing the board for 45 minutes). As a dive became more familiar, the target score would rise to a 5 or a 6.5, providing him with something specific to aim for besides the vague and unattainable "perfection."

Coaches and educators can teach their athletes and students to *avoid perfectionism by setting high, yet specific, standards*. Give them clear targets to focus on, reach for, and be disciplined about, so they don't stress about meeting an impossible standard of perfection.

Character Skills in Practice

Be **determined.** When learning a new skill, step out of your comfort zone and try the thing you haven't yet mastered. Keep at it, trying again and again, even when you've made mistakes.

Be **proactive** and let growth be your guide. A proactive learner is one who seeks out the knowledge and feedback they need. A learner guided by growth takes in advice that will help them grow, even when it's critical.

Be **disciplined.** A disciplined learner judges thoughtfully where to spend their effort. Instead of pursuing perfection in every direction, they set an ambitious goal and stick to it.

Part II: Scaffolds
(for sustaining motivation, overcoming obstacles, and getting unstuck)

While character skills help immensely with fueling greater achievement, they aren't always enough for a long and unpredictable journey. Like the driving route on a road trip, a person's path to growth may have traffic jams, steep hills, closed roads, or all three.

This is where *scaffolding* (or a temporary supporting structure) is needed. Scaffolds help us to learn, overcome obstacles, and they even help to sustain our motivation!

Fortunately, providing scaffolding for learners is a familiar practice for us educators. In this section, Adam Grant shows us which specific forms of scaffolding have been shown to be the best match for overcoming the common types of roadblocks, hazards, and delays learners face on their journeys.

Scaffolds that Sustain MOTIVATION

You might already be familiar with the concept of *deliberate practice*: the structured repetition of a task to improve performance, based on clear goals and immediate feedback. Some musicians and athletes have become well known for hours of deliberate practice.

However, for most of us, many hours of deliberate practice gets monotonous and downright boring. We won't be able to truly develop our skills (and our students certainly aren't going to) if we must suffer and slog through the learning. We risk burnout, boredom, and totally loss of joy of the learning task.

So, what do we do if we want our students to practice and work hard to learn? We must find scaffolds that specifically weave *passion and joy into their practice*. We need scaffolds that move students from the left to the right side below:

Move away from...		*To...*
"I should be studying." "I'm supposed to practice."	→	"I feel like studying." "I'm excited to practice."

Adam Grant found two types of scaffolds that help to **sustain our motivation for learning**, even when the going gets boring!

1st Scaffold: Taking BREAKS

Taking a break can be just as simple as it sounds. While not complicated, it can be easy to dismiss or forget. All learners need breaks. Even five or ten minutes to allow the mind to wander to a different topic, or move the body, can be enough to reap the benefits.

> **The Benefits of Breaks**
> • Breaks reduce fatigue, raise energy, and help sustain passion and enjoyment. Yo-Yo Ma limits his practice to between three and six hours a day, and Chopin urged his students to practice no more than two hours a day in the summer.
> • Breaks unlock fresh ideas. Lin-Manuel Miranda dreamed up *Hamilton* while relaxing in a pool on vacation.
> • Breaks deepen learning. Research shows that taking a ten-minute break after learning improved recall by 10-30%, and that new learning is retained longer if practice or study is interspersed with breaks.

Don't wait until your students desperately need a break. Plan physical and mental breaks into learning time and encourage everyone to take them well before the distracted (or distracting) behaviors of boredom appear. And remember that breaks aren't just classroom management and "getting the wiggles out," they also are proven to serve achievement and students' long-term passion for learning.

2nd Scaffold: Deliberate PLAY

In addition to breaks, **deliberate *play*** is the other type of scaffold research shows helps learners sustain motivation. The term comes from the combination of "deliberate practice" and "play." Deliberate play scaffolds are designed to make practice more enjoyable. They usually involve weaving variety or novelty into your practice.

Some learners set up deliberate play themselves, mixing up their tasks or inventing new challenges to try to keep their practice or study more fun ("How many tennis serves can I get in the box in a row?"). But often it is a teacher or coach who introduces the methods of deliberate play, showing students that practice can be more fun than they initially thought.

Research shows that injecting play into a stressful task can decrease burnout and improve a person's skills. But sometimes learners need help from *others* in setting up this scaffold to support them. In one study, deliberate play was included in the professional development of doctors, and it actually made them better doctors! We could certainly use this in our PD for teachers!

Arguably the best shooter in NBA history, Stephen Curry, started out as an underrated recruit. Initially he was small (for the NBA) and had weaknesses in quickness, explosiveness, and athleticism. Trainer Brandon Payne understood what scaffolding Curry needed: no boring workouts. Payne developed techniques for turning the *deliberate practice* of less-exciting skills (like running and dribbling) into *deliberate play*. Curry credits Payne's training sessions (full of mini-games, novel challenges, constant surprise, and variety) with transforming his performance on the court.

Instead of forcing the learner to rely on willpower to make it through boring practice, change the practice to make it less boring. Reimagine the *task itself* to make it both motivating, fun, and less strenuous.

> **Four Ways to Implement Deliberate Play**
> • **Mix it up.** Mix the fun parts in with the less fun. Instead of running followed by shooting practice, Brandon Payne mixes them together: try to score 21 points in one minute, but between shots you must sprint to center court and back.
> • **Embrace variety.** Instead of mastering one skill before moving on to the next, alternate. It keeps things interesting AND it's better for learning. For example, an art student could switch brush thicknesses and types of paint regularly.
> • **Compete.** Competition can be motivating and fun, but it often works best when learners compete against the clock or against their own records or attempt to reach a new and challenging goal.
> • **Impose limits.** Create challenges by taking a tool away. For example, clue vocab words with only gestures (no talking or writing). Or solve algebra problems, but one partner can only add and subtract and the other can only multiple and divide.

A Scaffold for OVERCOMING OBSTACLES

While a scaffold like deliberate play can get learners through the traffic jams of boredom, sometimes the road to achievement is steep or difficult in a way that can't be overcome just by hanging in there. When it comes to truly challenging obstacles, the image of a lone individual pulling themselves up by their bootstraps is a myth.

Learners have the best shot at overcoming long odds when they work with others and build on *combined* strengths. In this way, students can sometimes create their own scaffolding, as Adam Grant's students did when they began studying *together*. He says, "The students realized that the strongest bootstraps weren't the ones they created alone, but the ones they built together." It's tempting to call this scaffold "group straps," but puns aside, the term for combining efforts to achieve more than the sum parts is *synergy*.

Scaffold: SYNERGY

The exam to become a U.S. Naval officer is famously difficult to pass, but in 1944 a select group of men far exceeded others' performance. They were the first cohort of Black men permitted to train as officers and attempt the exam. The "Golden Thirteen," as they came to be known, faced prejudice from their teachers and peers, and self-doubt as well. While battling low expectations, they discovered a scaffold toward greater achievement: *each other*. Instead of competing, like many other officer candidates did, these men supported one another. They synergized and formed a true team.

Everyone knows that "teamwork makes the dream work" when the task is a group endeavor (like a team sport). But teamwork has hidden advantages even in individual pursuits (like studying for an exam).

Three Secret Benefits of Synergy

Knowing on Whom to Call – The Golden Thirteen quickly discovered who among them was best in math, who knew knot-tying, and who had a background in law, and they learned from each other. Studying with knowledgeable peers is shown to boost learning for everyone. Adam Grant allows his students to "phone a friend" on one exam question, which promotes studying together. How else would they know whom to call?

The Tutor Effect – It was true among the Golden Thirteen and research bears it out: teaching others helps the teacher learn more too. When people know they are accountable to explain a concept or teach a skill to their team, they'll work harder to be sure they really have it down. The very acting of teaching solidifies knowledge as well.

The Coach Effect – It is frequently more motivating to give than to receive. Advising others is active, and it subtly influences the adviser to heed their own advice. A study of high schoolers showed that being randomly assigned to give advice to younger students on staying motivated and avoiding procrastination *increased the advisers' report card grades across multiple subjects*.

Scaffolds for GETTING UNSTUCK

Of course, sometimes, on the road to achievement people simply get stuck. They're plenty motivated to keep going, they could even zoom up a steep grade if they had to, but the road ahead is just plain closed. In these cases, learners need scaffolds for finding a new route when the old route's not working.

As educators, we want to guide students on the road to higher achievement, but not every student's path will be the same, and some will encounter major barriers. Like the city workers who set out the signs to mark a detour, we do our best to keep learners moving forward. But how can we know which way the signs ought to point? How can we best help students bypass roadblocks?

Three scaffolds that are effective at getting learners unstuck are *backing up, finding a range of guides, and marking progress.*

1st Scaffold: Backing Up

To regain momentum, a learner may need to take their foot off the gas, back up, and use a different road than the one they initially set out on. Award-winning pitcher R.A. Dickey had a career full of stuck points and detours. His pitching was never as fast as it needed to be and after making it to the majors he was sent back to the minor leagues. Instead of continuing to struggle to increase his pitch speed, he found a *different way* forward: starting from square one with a different kind of pitch, the knuckleball, which could be pitched slow and still foil batters with its unpredictability and lack of spin.

Like Dickey being sent back to the minor leagues, sometimes, backing up is necessary. Take typing, for example. If you can only type about 30 word per minute by looking at the keys, you're going to need to become a worse typist before you can become a better one. When you first start touch-typing, you'll be slower than before and make tons of mistakes, but, by backing up and learning a *different* skill (touch typing), you could double your speed to 60 words per minute. Learning a new skill from scratch may make students feel like they're undoing their progress. Help them see that, in time, the new skill can propel them forward.

2nd Scaffold: Finding a Range of Guides

The usual advice, or even expert advice, might not be much help for a learner taking an unusual route. Dickey's coaches couldn't help him improve his knuckleball. It's rare, and they'd never coached it before. Instead, he sought out the few other knuckleball pitchers (including his competitors) to guide him and help him make progress. Educators can help stuck learners find possible paths forward by connecting them with helpful guides. Multiple guides are often better than just one, because they'll help the learner see the map as a whole instead of just one route.

Research has uncovered the powerful impact of a specific type of guide, *role models,* when it comes to shaping young inventors. Access to role models (in this case, other inventors) had even more impact than cognitive ability on whether a person went on to patent a new invention. And for people from under-represented groups, the presence of role models *like them* matters. The same study showed, for example, that girls only became more likely to patent an invention if they had access to *female* inventors.

Educators seeking to scaffold students on difficult or unusual paths should look for ways to surround those students with role models, especially role models who share traits or a common background with the students.

Also, seek guides who are *non-experts*. It might seem counterintuitive, but the best guides are often those who can relate to the struggle, not those who are the very best at a particular skill. This is sometimes known as *Einstein's curse* because as brilliant as he was, Einstein himself struggled to teach physics concepts to beginning students. He knew so much that he had a hard time paring his ideas down to the basic concepts his students needed. And while few of us claim to be Einsteins, this is a challenge that many educators face when we teach subjects that come easily to us but perhaps not to our students.

Help your students find guides who struggled in similar ways. A sixth grader who needs help with executive skills, for example, might get better guidance from an eighth grader who has executive functioning challenges than a classmate who is always super organized.

3rd Scaffold: Marking Progress
Skills don't always grow at a steady pace. As we learn, sometimes our progress comes in smaller and smaller increments. Sometimes, they're so small they're hard to see. As he built up his new skill pitching the knuckleball, Dickey couldn't measure his success by normal metrics like strikeouts or games won. He was too much of a beginner. He kept his chin up by counting how many pitches he could throw without spin in order to see the small, daily progress he was making. If a student is working hard but still feels far from their target, find ways to help them see their small wins and incremental progress.

For a student who knows they're reading below grade level, help them measure their improvements instead of seeing only their deficits. For a student struggling with attendance, help them count and celebrate the number of days they made it to school on time this month versus last month. A calendar of days attended will likely be more motivating than a lecture about how they may never graduate if their attendance doesn't improve.

Students who face great adversity, like poverty or instability at home, may be working toward goals like graduation or college acceptance, feeling at times like they are running to stand still while they see others achieve those same goals with far less effort. As an educator, you can scaffold their efforts by helping them see their struggle itself as an achievement. They might feel like they're running to stand still, but they're building character skills, which will serve them all their lives. Educators can teach students to mark the progress they *are* making and celebrate their successes even when their path doesn't look like everyone else's.

Part III: Systems
(that bring out the best in every student)

Students from Finland consistently rank among the top in the world, surpassing U.S. students and many others on international achievement measures. It may be tempting write off Finland's academic success as the upshot of the country's culture or affluence, but countries with similar profiles (like Norway and Sweden) do not produce comparable educational results. So, what exactly is Finland doing differently?

The country of Finland has built intentional, nationwide *systems* for unlocking potential by making it easier for teachers to provide three essential ingredients from kindergarten through high school: *relationships, individual support, and love of learning.* The benefits of these systems are clear, and fortunately, the systems themselves are possible to replicate. Here's how they work:

Systematizing Relationship Building
Finnish schools use *looping*: teachers move up to the next grade with their students, and the students have the same teacher two or more years in a row (teachers sometimes stay with their students for all of elementary school). This structure helps teachers and students build stronger bonds by having several years together.

The benefits of looping have been shown in studies done in Indiana and North Carolina, but currently only 3% of U.S. schools loop. Skeptics worry that the practice might stick students with an ineffective teacher for multiple years, or that teachers would be prevented from specializing in their grade's curriculum. However, as Grant says, looping helps teachers specialize *in their students* instead.

Research shows that looping has the greatest positive impact on the least-effective teachers and lowest-achieving students. Teachers are given time to develop deeper understanding of their students, especially their struggling students, and teachers and students have time to grow together.

The accountability system for principals in Finnish schools also supports relationship building with students. Rather than being held responsible for test scores or dashboard metrics, Finnish principals' responsibility is to individual students. Principals are required to teach classes in addition to their leadership duties, *and* they are expected to monitor the progress and well-being of every single student in the school. This system points principals' priorities toward relationship building. Adam Grant tells the story of one principal who responded to concerns about a student's progress by placing him in the principal's own class and making the child's education the principal's personal mission.

Systematizing Individual Support
Many U.S. school systems look for early signs of struggle (especially in reading) and intervene right away to provide those students the support they need. The nation of Finland, however, takes it a step further, meeting with parents and discussing the needs of each child regularly starting in kindergarten, and then following through to provide support. In Finland, this isn't a service for cases of extreme need, but a part of every child's education. It's part of their system. About 30% of Finnish students are provided with some type of individualized support during their time in school.

Student welfare teams (including general- and special- education teachers, psychologists, social workers, nurses, and principals) are in place at all Finnish schools, and they spend time discussing the needs of every child. This type of individual focus likely sounds both wonderful and impossible to many U.S. school leaders. In-depth meetings about student needs (not to mention the follow-through supports) are time consuming enough just for the U.S. students with IEPs (for whom it's legally required). How on earth are Finnish schools finding the time to do this for *every* student? They took one of the scaffolds in the last section – breaks – and made a *system.*

Finnish schools have figured out how to systematize the benefits of breaks. As mentioned earlier, breaks provide deeper learning, improved recall, increased enjoyment of learning, and reduced fatigue. So, the Finns created a system to provide kids with extra recess, and this gave teachers more time, too. Teachers in Finland have an additional hour per day of non-teaching time more than U.S. teachers do. They can use it for meeting about and working on individualized plans for students as well as whatever planning, grading, or other tasks are needed. In addition to benefitting students, this helps shield teachers from night and weekend work, reducing burnout, and helps teachers to be more prepared and effective, especially early in their careers.
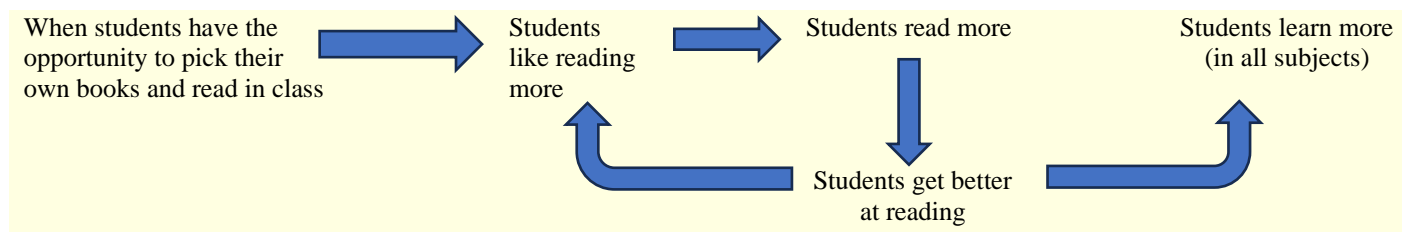
Systematizing the Love of Learning
Finnish schools prioritize the lesson that learning is not a burden; it is something to enjoy. And while "learning is fun" might sound like a cute poster slogan, it's backed by a mountain of data. Dozens of studies demonstrate that deliberate play is more effective than direct instruction at teaching certain cognitive skills as well as character skills (like discipline and determination), which we know translate into higher achievement in other areas. Research also shows that students who enjoy school early on, score higher on standardized tests in high school.

Finnish schools set out to create a system to support the idea that *learning is fun.* To that end, Finnish high school students do less than 3 hours *per week* of homework, and students of all ages are tested far less than U.S. students (most never take a standardized test until high school). Finnish kindergarteners spend most of their day in play of one sort or another. Crafts, games, outdoor play, singing, building, and activity stations fill their school days with both fun and learning.

And once students are no longer motivated by the mud pies and pretend shops of their kindergarten days, fun in learning often comes in the form of choice and autonomy. For example, Finnish middle schoolers exercise choice, decision making, and academic skills of all sorts to run a miniature city.

In reading, rather than marching students through a list of classics to analyze or reading passages assigned for the purpose of building specific skills, students develop their *love* of reading through the opportunity to choose their own books and spend time reading them in class (and recommending them enthusiastically to their classmates). Like "fun" learning, building excitement around reading might sound like a "nice-to-have," but really, it's a "must." Research backs this up. Take a look at the virtuous cycle of impact on achievement that's kicked off by free-choice reading:

When students have the opportunity to pick their own books and read in class → Students like reading more → Students read more → Students learn more (in all subjects) → Students get better at reading → (back to Students like reading more)

An education system isn't truly successful until all children – regardless of background and resources – have the opportunity to reach their potential. Educators and school leaders everywhere share that vision of success, but the vision frequently feels out of reach. We put ourselves on the path to reaching the dream of boundless opportunity when we teach the character *skills* of determination, proactivity, and discipline, and when we support students with *scaffolds* that help them stay motivated, overcome obstacles, and get unstuck, and when we put into place *systems* that have been proven to unlock the doors to achievement for all.

Below are a few activities you can use to engage teachers in thinking about proven methods for increasing student achievement through character skills, scaffolding, and systems.

Introduction

Facilitator share: *A study in Tennessee found a group of students who would go on to earn $320,000 more income than their peers over their lifetimes **because of something they were taught in school**.*

Take a look at the slide below and discuss at your tables: What do you think students were taught that led to their success as adults?

> **What made the difference?**
>
> STEM   Growth mindset   Art
>
> Character skills (like determination)
>
> Critical thinking   Creativity   Chess
>
> Science-based reading instruction
>
> Team sports   Music   Problem solving

Invite participants to tell the whole group what they thought might have made the difference in lifetime earnings for the Tennessee students and why. After a brief discussion, affirm that the things on the list are all valuable, but that what made the difference for the students in the study was: *character skills*, primarily these three:

- *• **Determination:** persisting in the face of obstacles, taking on challenging work*
- *• **Proactivity:** taking initiative to engage in learning, seek information, and solicit feedback*
- *• **Discipline:** staying focused, resisting impulse and distraction*

Emphasize that these are not cognitive skills, and they are also not in-born traits. They are *character skills* that can be taught.

This research and the other ideas presented in today's session come from the book *Hidden Potential* by Adam Grant, which participants could read for more in-depth learning if they're interested.

Part I: Skills

Designate 3 stations in different areas of the room so teachers can go to learn about and discuss one of the 3 character skills above. Have participants choose a station and go there. At the station, provide the definition of the skill as well as one unique example of its application in education for participants to read. Print out the following definitions and cut them apart, placing the relevant information at each station, to be read aloud by the participants.

Determination: persisting in the face of obstacles, taking on challenging work

Polyglots, those rare individuals who can speak lots of languages and acquire new languages quickly, seem like perfect examples of people who just "have a gift." To those of us who took four years of high school French and can't quite remember how to ask where the bathroom is, a person who can carry on a conversation in ten different languages seems like they must simply possess a different kind of brain. But they don't. What they have is the **determination** to continue to move forward despite mistakes and discomfort. They started *speaking* the new language right away, and they keep at it (determination!), no matter how awkward or embarrassing, and no matter how many mistakes they make.

Proactivity: taking initiative to engage in learning, seek information, and solicit feedback

Someone who is being a **proactive** learner seeks out new information. They ask questions. They ask for advice. They find books and contact experts. They notice problems and then figure out how to solve them. World champion javelin thrower, Julius Yego, exemplifies the character skill of proactivity. From a rural village in Kenya, he lacked access to the kinds of facilities, equipment, and coaching that other athletes relied on. When asked who coached him, he said "YouTube." Determined to improve, Yego watched YouTube videos of top javelin throwers, studied what he saw, and trained himself.

Discipline: staying focused, resisting impulse and distraction

Sometimes even the hardest workers lack discipline in a surprising way: they spread their focus too thin in pursuit of all-around perfection. But perfection is not a realistic goal. Greater growth results when we choose what to prioritize, what to minimize, and we use **discipline** to stick to it. *Every educator, coach, and parent should know that study after study has shown that people encouraged to "do their best" learn less and perform worse than those who are given a specific, challenging goal.* For example, for a diver attempting a new dive, at first any score above a zero could be considered a success. As a dive becomes more familiar, the target score would rise to a 5 or a 6.5, providing the diver with something specific to aim for.

A. In each of the 3 groups, read the character skill descriptions.
One volunteer at each station should read aloud the definition and additional paragraph provided on the printout.

B. Display a slide with the questions below for each group to discuss.
Provide each group with a large sheet of chart paper and markers for participants to record their ideas.

> **Discussion Questions**
>
> 1. Do you have any examples of ways you currently teach this character skill in your classroom?
>
> 2. What more could you do to teach and allow students to practice this character skill?
>
> 3. How do you think this character skill would benefit your students now and in the future?

C. Do a Gallery Walk to hear each group's thinking.
As a whole group, walk to each of the three stations and have each group describe what is on their chart paper and share briefly what they learned as well as the results of their discussion.

D. Do a "whiparound" to hear one commitment for one way to teach one of the 3 character skills next week.
After hearing all of the ideas from the 3 groups, give teachers some quiet time to think about and choose *one way* they might include the teaching of one of these character skills in one of their classes next week. Then do a "whiparound" in which each teacher has 30 seconds to share what they plan to implement aloud.

Part II: Scaffolds

For this portion, ask participants to sit with others who teach the same grade level or similar content if possible.

Facilitator share: *Educators know that sometimes students need more than just character skills like determination to achieve their potential. We can help them learn and achieve more by providing **scaffolding**.*

A. Discuss what "scaffolding" means.
Invite participants to take one minute, turning to talk to someone beside them, about what scaffolding means to them or looks like in the context of what they teach.

After a minute, share with the group: *Scaffolding is a temporary supporting structure that helps learners do something they are not quite, but almost, ready to do on their own. A surprising scaffold that research reveals to be extremely effective is called **Deliberate Play**. Deliberate Play can support learners as they practice a skill they might otherwise consider boring. By making the work fun and playful, study and practice become more motivating and students are able to do more of it and therefore learn more.*

B. Display a slide with the following information:

> **Four Ways to Implement Deliberate Play**
>
> **Mix it up.** Mix the fun parts in with the less fun.
>
> **Embrace variety.** Instead of mastering one skill before moving on to the next, alternate.
>
> **Compete.** Competitions can be fun, but competing against a clock or a "personal best" is often better than against peers.
>
> **Impose limits.** Create challenges by taking a tool away. For example, the game charades takes away talking.

C. In grade- or content-teams, brainstorm ideas to include more Deliberate Play.
Ask participants to talk with other teachers who teach same grade or content. Brainstorm a few things in your common curriculum that students tend to find boring or have a hard time staying motivated to practice. Write each at the top of a separate sheet of paper. Allow a bit of thinking time, then pass the papers around the group, with everyone adding an idea of how deliberate play could be used to support learning. Participants could include ideas they already use that resemble deliberate play or generate new ones.

D. Choose one Deliberate Play idea to implement across the grade or subject area.
Groups gather papers, read out ideas, and as a group, vote on an idea (ideally one that's not already used) to develop a bit further. Plan how it could be used in the classroom.

E. Small groups share out to the larger group.
What learning objective did they choose and what was their idea to use deliberate play to support it? Encourage groups to act out or demonstrate the idea if possible.

Part III: Systems

Facilitator share: *Sometimes students excel due to character skills like determination and sometimes they need a scaffold from a teacher to reach their potential. But sometimes a system is needed. Classroom, grade-level, or school-wide systems can help maximize student achievement.*

A. Reflect on past experience.
Invite participants to reflect silently on their time as a student. Did they have a particular class or assignment that helped them experience learning as *fun?* What was it? After a few minutes, ask participants to turn to a neighbor and share what they recalled.

Facilitator share: *Finland is one of the highest scoring countries on international measures of student achievement. They've found a way to **systematize** things that other school systems value, but sometimes leave to chance. For example, they've created systems to intentionally teach that learning is fun, which is an attitude proven to result in higher achievement. One of the main ways they make learning fun is by providing students with **choice and autonomy**. Centers and free play for younger kids. Student-driven projects and free-choice reading for older kids.*

B. Take a poll.
Ask participants to raise their hand if their memorable experience of fun in learning (that they just talked about with their neighbor) included either *choice* (for example, choosing their own topic to research) or *autonomy* (for example, taking on a new level of responsibility for a project) or both.

C. Individuals write.
Ask individuals to write in response to these questions: Where are some places you already include autonomy and choice in your teaching? Where could you add opportunities for autonomy and choice? What might be the results? What are concerns do you have?

D. Share with and support a partner.
In pairs have teacher share thoughts on autonomy and choice in their classes as well as their hopes and concerns. Encourage partners to provide support to each other for moving forward with ideas to increase choice and autonomy and ways to address possible concerns. Partners should then swap roles so everyone gets a chance to share and a chance to listen and advise.

E. Invite anyone who wants to share their partner's idea for adding autonomy and choice into their curriculum to the large group as time permits.