

CHAPTER IX

Capture and Engagement

“The only discipline, important for itself, is self-discipline, and this can only be acquired by a wide use of freedom.”

Alfred North Whitehead, “The Rhythmic Claims of Freedom and Discipline”

📖 The Reading Chart

In June, the library posts a summer reading chart. Every book read earns a sticker, and every ten stickers earn a coupon for a free pizza.

A ten-year-old girl takes the chart seriously. By the end of July she has forty stickers and four pizzas. She chose the thinnest books on the shelf, and she can tell you very little about any of them. On the first of September, when the chart comes down, she stops reading. By October she hasn't opened a book that wasn't assigned.

Her younger brother ignored the chart. In August he found a long fantasy novel in a box in the garage, and he read it under the covers with a flashlight, then read the sequel, then went looking for the third. Nobody gave him a sticker. He's still reading.

If you had stood by the circulation desk that July, you would have bet on the girl. She came in twice a week, returned a stack, and left with another. Her brother came in once all summer, to ask whether the library had the third book. Every number the library kept, visits and checkouts and stickers, said the chart was a triumph. The librarians put her photo on the bulletin board.

The chart worked, in a sense. It got the girl reading forty books, which is a lot of books. And the moment it came down, there was nothing left.

This chapter and the two after it are about drivers like the chart: the engagement drivers that come from outside the learning object. They come in three families: **social** (competition, cooperation, an audience, models, belonging, praise, the bond with a teacher), **story** (narrative, curiosity, play, entertainment), and **structural** (rewards, grades, money, progress, streaks, leaderboards, deadlines, games).¹ People are social, imitative, and playful, and a model of learning that relies on solitary curiosity alone leaves its strongest drivers unused. Chapter 10 takes the drivers that come from other people. Chapter 11 takes the ones a designer builds: stories and scoreboards. This chapter builds the instrument for judging all of them.

Outside drivers capture attention. Engagement is something narrower: sustained mental investment in the thing being learned.² Capture can turn into engagement, and much good learning starts that way. An outside driver is judged by where it leads: toward the learner owning the work, or away from the object and onto the driver itself.³ No outside driver is corrupt in itself. Each becomes corrupting when it pulls attention off the object and holds it there.

Chapter 8 described ownership, the far end of the road. This chapter is about the road: how a learner who starts outside the work, holding a sticker chart, comes to stand inside it, or doesn't.

🐝 The Same Driver, Two Ways

As in the last two chapters, the clearest way to see the difference is to hold one thing still. Here it's the driver. In each pair, the driver is the same. Only where it points changes.

Competition: The Spelling Bee

	CAPTURE	ENGAGEMENT
What the learner watches	The classmate she wants to beat	The words: the harder, the better
What a win means	She came out on top	She can spell words she couldn't spell last month
What a loss does	Ends her interest in spelling	Sends her to the dictionary, to the word she missed
After the contest	Spelling stops until next year's bee	She keeps a list of words she wants to master
What lasts	A ranking	A vocabulary, and a way to build it

Story: The Dinosaur

	CAPTURE	ENGAGEMENT
Where the story points	A cartoon dinosaur dances between math drills as a reward	The class is a dig team, and measurement tells them how big the dinosaur was
What the math is for	Getting through to the next cartoon	Answering a question the story raised
What the learner remembers	The cartoon	How long a femur has to be to hold up twelve tons
When the story ends	The math ends with it	The math keeps its meaning

Structure: The Reading Streak

	CAPTURE	ENGAGEMENT
What the streak counts	One page read before midnight to keep the count alive	Nights spent in a book she can't put down

	CAPTURE	ENGAGEMENT
What the learner watches	The number	The story
When the streak breaks	Reading stops; the count was the point	She picks the book back up the next night
What lasts	A record	A reader

In every pair, the driver does its job: it gets the learner started. The difference is whether it points at the object.

Think of a turn signal and a steering wheel. A driver that points at the object works like a turn signal: it gets your attention, and then the wheel takes over and the car actually turns. A driver that points at itself is a turn signal that never leads to a turn. It has to keep blinking, brighter and faster, to hold you. Today the reward is a dancing dinosaur; next month it has to be a dragon; next year, a whole video game.

A driver that points at the object can hand its work over to the object. A driver that points at itself has to keep working forever.

🔖 Capture and Engagement

Two words, then. **Capture** is attention held by a driver: the streak count, the rank, the reward, the cartoon. **Engagement** is mental investment in the learning object itself. A learner can be fully captured and barely engaged; the girl with forty stickers was. The central question of these three chapters is when capture turns into engagement.

Identical in July

Here is what makes the question hard. In the moment, capture and engagement look the same. Both put a child in a chair with a book. Both raise time on task, which is the number most learning software reports and most dashboards display. The girl's July and her brother's August would score identically on any system that counts minutes, and the girl would win on books.

They come apart in only a few places, and most of them take time to see.

	CAPTURE	ENGAGEMENT
Time on task	High	High
Effort	High	High
Where attention points	At the driver: the count, the rank, the prize	At the object: the words, the story, the problem
What gets better	The amount	The work
After a setback	Stops, or games the count	Sharpens, and often goes deeper
When the driver is removed	Stops	Keeps going

The first two rows are the ones that are easy to measure. The last four are the ones that tell you anything. Most of this chapter is about reading those four rows.

The Road Inward

The Continuum

Richard Ryan and Edward Deci (2000) describe motivation along a continuum of **internalization**: a road that runs from outside the learner to inside. Take someone who goes to the gym, and walk her down it.

- **External regulation.** Acting to get a reward or avoid a punishment. She goes because her insurer gives her a discount for three visits a week.
- **Introjected regulation.** Acting to avoid guilt or to win approval, including her own. She goes because she'd feel terrible if she didn't, or because she wants to be seen as disciplined.
- **Identified regulation.** Acting because she values what the activity leads to. She doesn't love the treadmill, but she values the stamina it gives her to keep up with her kids.
- **Integrated regulation.** Acting because the activity has become part of who she is. She's a person who trains.

- **Intrinsic motivation.** Acting because the activity itself is interesting or satisfying. She loves the feeling of lifting.

From outside, all five look the same: a woman lifting a weight. Motivation that starts outside the learner can move along this road, and most outside drivers begin at the external end.

A Boy at the Piano

Ask a nine-year-old why he practices the piano, and his answer tells you where he stands.

“Because Mom says no screen time until I do.” That’s the external stop.

“Because I’d feel bad. Mrs. Okafor can always tell.” Introjected.

“Because I want to play at Grandma’s birthday.” Identified.

“Because I play piano. That’s my thing.” Integrated.

“Because I like it. Wait, listen to this part.” Intrinsic.

Researchers ask children almost exactly this. Richard Ryan and James Connell (1989) gave schoolchildren a list of reasons for doing their homework (because I’ll get in trouble if I don’t, because I want the teacher to think I’m a good student, because I want to understand the subject, because it’s fun) and asked how true each one was. The answers sorted along the road the way the theory predicted, and they predicted different lives in school. Children who endorsed the guilt-and-approval reasons reported more anxiety, and coped with failure worse. Children who endorsed the valuing reasons reported more enjoyment and effort.

The same boy can give all five answers in a single year, and sometimes in a single week. A boy who practices for screen time in September can be practicing for Grandma in November and for the sound of the left hand in March. The road describes reasons, and reasons move.

What Each Point on the Road Produces

Does the starting point matter if the scale gets played either way? The evidence says it matters a great deal.

Joshua Howard, Julien Bureau, Frédéric Guay, Jane Chong, and Richard Ryan (2021) pooled 344 samples and more than 223,000 students. Intrinsic motivation was related to school success and to well-being. Identified regulation, valuing what the activity leads to, was especially strongly related to persistence. Introjected motivation, acting from guilt or for approval, predicted persistence too, but it also predicted signs of ill-being: people kept showing up and felt worse for it. External regulation, acting for rewards or to avoid punishment, wasn't associated with performance or persistence at all, and it was associated with lower well-being.

The Anxious Achiever

Look closely at the middle of that result, because a great many successful students live there.

A sixteen-year-old has a perfect transcript. She studies until one in the morning, and she has never missed an assignment. Ask her why and she doesn't mention biology or French. She says she can't stand the thought of a B. Her parents would be disappointed, though they've never said so; she would be disappointed, and she has said so, often. She persists, exactly as the meta-analysis predicts. She is also exhausted, and quietly miserable, and she has no idea what she would study if grades disappeared tomorrow.

Schools tend to celebrate this stop on the road, because from outside it looks like the destination. It produces effort, attendance, and scores. Under the model, it reads as partial engagement: she is deeply invested in not failing, and only lightly invested in the objects she studies. The outside driver, in her case the grade and the approval it stands for, has moved inside her without becoming hers. Introjection is a driver that has taken up residence.

The fix is rarely to lower the standard. It's to give the standard a reason she owns: a question in biology she actually wants answered, a reader for her French who isn't grading it. Then the same hours start to buy something different.

Quality and Quantity

Christopher Cerasoli, Jessica Nicklin, and Michael Ford (2014) looked across forty years of research in school, work, and sport: 183 samples, more than 212,000 people. Intrinsic motivation predicted performance moderately to strongly whether or not incentives were present. And the two did different jobs. Intrinsic motivation better predicted the **quality** of performance. Incentives better predicted its **quantity**.

Outside drivers can buy more reps. They don't buy better ones. Forty thin books is exactly what a sticker chart should be expected to produce.

How a Driver Moves a Learner

If the road matters, the practical question is what moves people along it. The research gives two answers, one about the driver and one about the learner.

Controlling or Informing

Every outside driver carries a message along with it. Deci and Ryan (1985) called this its **functional significance**: an event can be experienced as **controlling**, pressure to think or act a certain way, or as **informational**, news about how you're doing. The same object can carry either message.

Picture two swim coaches handing out the same ribbon for most improved swimmer. The first says, "See what happens when you do what I tell you?" The second says, "Your hundred dropped two seconds since March, and most of it came off the turns. That work paid off." The ribbon is identical. The first coach handed over a leash. The second handed over a mirror.

Experiments find the same split. Richard Ryan, Valerie Mims, and Richard Koestner (1983) gave people the same performance-based reward for solving puzzles, delivered with either controlling language or informational language. The informational version left intrinsic motivation intact or raised it; the controlling version lowered it. Across 128 experiments, positive feedback that told people about their competence increased free-choice

motivation, while expected tangible rewards for doing a task reduced it (Edward Deci, Richard Koestner, and Richard Ryan, 1999).

A practical rule falls out. Whatever the driver, wrap it in information about the work. A sticker that says *you finished* is a small leash. A sticker that marks the first book she read without stopping to ask about a word is a small mirror.

What Feeds the Road

The second answer is about what the learner needs. Self-determination theory names three basic needs: **autonomy**, the sense of acting from one's own will; **competence**, the sense of being effective; and **relatedness**, the sense of being connected to others. Ryan and Deci (2000) argue that internalization runs on all three. People take in the values of people they're connected to. They take in what they can actually do. And they integrate what they've had a hand in choosing.

Those three needs map onto the rest of this book. Ownership, in Chapter 8, feeds autonomy. Fit, in Chapter 5, feeds competence, because work at the edge is work you can do. The people around the learner, in Chapter 10, feed relatedness.⁴ An outside driver moves a learner along the road to the extent that it delivers one of these three. A chart that a child keeps herself, for books she chose, read with a parent who asks about them, touches all three. A chart posted by strangers, for books she picked by thickness, touches none.

The Road Runs Both Ways

Drivers can also move people backward, and the move can be permanent.

Uri Gneezy and Aldo Rustichini studied ten day-care centers in Haifa, Israel. Some parents picked their children up late, which forced a teacher to stay after closing. In six centers, the researchers introduced a fine: ten shekels for any pickup ten minutes or more after closing. You can guess what a fine is supposed to do. Late pickups at those centers rose, over a few weeks, to nearly double their earlier level. Before the fine, a late parent was imposing on a

teacher who had to wait, and felt it. After the fine, the parent was buying extra child care at a reasonable price.

Then the fine was removed. Late pickups stayed at the higher level (Gneezy and Rustichini, 2000, “A Fine Is a Price”). The guilt didn’t come back. Once lateness had become a purchase, it stayed one.

The preschoolers in Chapter 8 who drew less after being promised a certificate for drawing show the same move in children.⁵ Kou Murayama and his colleagues (2010) watched it happen in the brain. People played a stopwatch game, trying to stop a watch at exactly five seconds. Half were paid for each success. When the payments ended, the paid group played the game less in a free period, and the brain’s reward circuitry that had been active during the game quieted, compared with people who had never been paid. The game had become a job, and when the job stopped paying, there was no reason to play.

The road inward is slow to walk. A badly chosen driver can push someone back along it in an afternoon.

✿ How Capture Becomes Engagement

Most good learning still starts with capture. A child’s first contact with music is a song that grabs her, and with dinosaurs a skeleton three stories tall. Nobody chooses an interest before meeting it. So the question becomes how the handover happens: how attention held by something outside becomes investment in the thing itself.

Interest Has Phases

Suzanne Hidi and K. Ann Renninger (2006) describe interest developing in four phases.

1. **Triggered situational interest.** Something in the environment grabs attention: a surprise, a vivid image, a puzzle. It may last minutes.

2. **Maintained situational interest.** The environment keeps holding it: a project, a good teacher, a group. Attention persists, but only while the support does.
3. **Emerging individual interest.** The learner starts coming back on their own. They ask questions nobody assigned, and they value what they're learning.
4. **Well-developed individual interest.** A durable attachment: knowledge, value, and the habit of returning, which the learner sustains with little outside support.

Follow a boy through it. A class trip to the natural history museum puts him under a skeleton the height of a house: triggered. The teacher turns the next month into a dig, with the class measuring bones to estimate the animal's weight: maintained. In March, he checks out three fossil books nobody assigned and starts correcting the dates on his cousin's dinosaur toys: emerging. At fifteen he spends his Saturdays volunteering in the museum's fossil prep lab, scraping matrix off a vertebra with a dental pick: well developed.

Outside drivers do most of their work in the first two phases. They trigger, and they hold. The handover happens between the second and third, when the learner starts returning unasked. That moment is the one to watch for, and it's the moment when outside drivers should start stepping back.

Value the Learner Can See

One way to cross from the second phase to the third is to let the learner see what the work is for. Chris Hulleman and Judith Harackiewicz (2009) asked ninth-grade science students to write short essays during the semester. Some wrote about how the material related to their own lives. Others wrote summaries of the material. For students who hadn't expected to do well in science, writing about its relevance raised their interest in science and their grades.

Nobody paid those students, and nobody ranked them. They moved from the external end of the road toward identified regulation, valuing what the

work leads to, because someone gave them a few minutes to find a reason of their own. This is worth, from Chapter 7, working as a bridge.⁶

The Valley

Some skills feel good only after competence arrives. The first months of the violin sound like a cat in a drainpipe. The first weeks of a new language are a long humiliation in the present tense. Between the first spark and the point where the work rewards itself lies a valley, and many learners never cross it.

Benjamin Bloom and his colleagues (1985) interviewed 120 people who had reached world-class levels in six fields: concert pianists, sculptors, Olympic swimmers, tennis players, research mathematicians, and research neurologists. The first teachers, in the early years, gave copious approval. They rewarded effort more than achievement, criticized rarely, and let children explore whatever part of the field excited them. In the middle years the teacher became a coach: exercises, standards, constructive criticism, praise tied to real achievement. In the later years came masters, world-class experts who helped the student find what was distinctively theirs.

Read through this chapter, Bloom's first teachers were outside drivers, used deliberately. Warmth, approval, and play carried children across the valley until competence could carry them. Then the drivers changed. It's the same pattern as Whitehead's rhythm, romance before precision.⁷

Three Handovers

Put together, the research points to three ways the handover happens.

- **Through competence.** The learner gets good enough that the work itself becomes rewarding. The violin stops sounding like a cat.
- **Through value.** The learner sees what the work is for, and the reason becomes theirs.
- **Through identity.** The learner becomes a kind of person: a reader, a swimmer, someone who builds things. Chapter 10 follows this route through belonging.⁸

An outside driver is doing its job when you can say which handover it's carrying the learner toward. A sticker chart can carry a child toward competence, if the books are at the edge of what she can read and each one leaves her a little stronger. It can't carry her anywhere if the books are chosen for thinness.

The further inside the learner, the more the motivation serves her

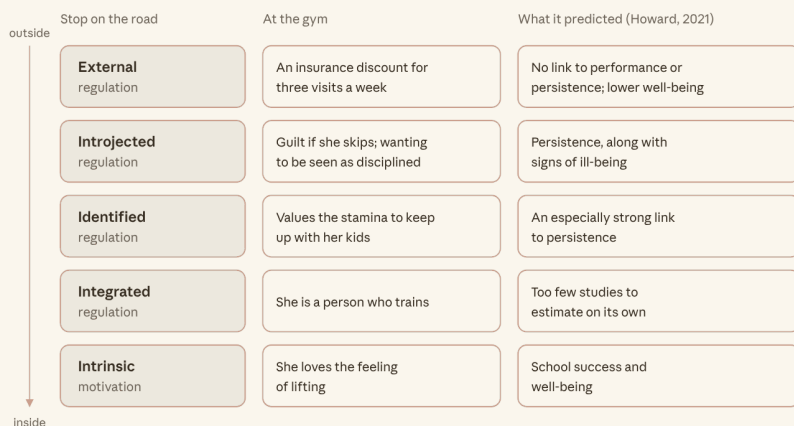


Figure 9.1 · the internalization continuum (schematic)

From outside, all five stops look like a woman lifting a weight. Further along the road, the motivation predicts more of what lasts. The handovers are how a learner moves from left to right.

🛠 Working Tests

Five questions tell capture from engagement. A parent can ask them at a kitchen table, a tutor in a session, and software in a log. None needs a questionnaire.

The Removal Test

Remove the driver. Does the learner keep going?

This is the oldest test in the field. In Edward Deci's experiments in the early 1970s, people solved three-dimensional block puzzles. Some were paid a dollar for each puzzle solved. Then the experimenter left the room for eight minutes, saying they could do whatever they liked, with magazines on the table and puzzles still on hand, and watched through a one-way mirror. People who had been paid spent less of that free time on the puzzles (Deci, 1971). The free-choice period became the standard measure of intrinsic motivation, and it's the measure behind most of the rewards research in Chapter 11.

You rarely need a one-way mirror. Life runs removal tests for you: the end of a season, the summer break, the week a tutor is sick, the day the chart comes down. Watch the first week after. The reading chart came down on the first of September, and the test was over by October.

Three results are possible. The learner keeps going: engagement. The learner stops: capture. Or the learner shifts to something nearby, the boy who quits the reading chart and starts drawing maps of the fantasy kingdom, which usually means the interest was real and the driver was pointing at the wrong object.

If you run the test on purpose, run it gently. Remove the driver quietly, for a while, at a natural break, and don't announce it as a test. An announced removal is just another driver.

With age, the test changes scale. For a four-year-old it's the next free-play period: does she return to the puzzle with no one watching? For a teenager it's the summer. For an adult it can take years: the certification is earned, the employer stops paying for courses, and the question is whether the learning continues.

The Attention Test

Where does the learner look: at the object, or at the count, the rank, the prize?

Hand a student a paper with three paragraphs of careful comments and a B+ at the top, and watch the eyes. The order they travel in is data.

So is talk. Ask a child how practice went. “I got ninety-two percent” and “the third problem had a trick in it” are answers from two different places. The first sentence a learner says about a session usually names what held their attention. Over dinner, listen to what comes up unprompted. A child absorbed in fractions brings up fractions. A child captured by the math app’s leaderboard brings up the leaderboard.

Software can read this directly. A learner who visits the leaderboard between every problem is watching the board. A learner who skips the celebration animation to get to the next problem is watching the problems.

The Ownership Test

Is the driver moving the learner toward owning the work, or standing in for ownership?

The signs are the ones from Chapter 8: initiative, “my” language, returning unasked, setting one’s own standard, explaining the work to others.⁹ A useful question to ask yourself: if the driver vanished tomorrow, who would notice first, the learner or the adult? If the adult would be the one to notice, because she’d have to start nagging again, the driver has been doing the adult’s job and not the learner’s.

The Quality Test

Is the work getting better, or only more plentiful?

Choose one marker of quality for each domain and track it beside the volume. For books: can she tell you what happened, and what she thought of it? For practice: is the tempo rising at the same accuracy? For writing: is she revising? A reading log that shows forty books and no marker of quality is a reading log that can’t tell the girl from her brother.

The Loss Test

What happens after a loss: a broken streak, a lost race, a missed badge, a bad grade?

A chess player who loses a game she cares about sets the pieces back up to find the move where it went wrong. A learner held by the streak alone closes the app. In Carol Diener and Carol Dweck’s study from Chapter 8, children facing problems they couldn’t solve split along this line: some blamed their ability and fell apart, others treated the failure as a problem and kept improving.¹⁰ Engagement survives a loss and often sharpens. Capture collapses.

The window is short. What a learner does in the next day after a loss tells you most of what you need to know. A four-year-old whose block tower falls either rebuilds it or walks away. A fifteen-year-old who loses a debate round either asks the judge what she missed or says debate is stupid.

Reading the Tests Together

TEST	THE QUESTION	CAPTURE LOOKS LIKE	ENGAGEMENT LOOKS LIKE	HOW LONG IT TAKES TO READ
Removal	Remove the driver: does the learner keep going?	Stops	Keeps going, or moves to a nearby object	Weeks; life often runs it
Attention	Where does the learner look?	The count, the rank, the prize	The words, the problem, the work	One session
Ownership	Is the driver standing in for ownership?	The adult would miss the driver first	“My” language, returning unasked	Days
Quality	Better, or only more?	Volume rises; quality flat	Quality rises, sometimes with less volume	Weeks
Loss	What happens after a setback?	Quits, or games the count	Studies the loss, comes back	A day

No single test settles a case. Two or three pointing the same way usually do. The attention test and the quality test can be read inside a single session, which makes them the everyday instruments. The ownership and loss tests take days. The removal test takes the longest, and it’s the one that settles arguments.

• The Fade

Scaffolding on a building goes up first and comes down when the walls can stand. Outside drivers work the same way, and the coming down has to be planned as carefully as the going up.

Start Strong

Outside drivers are most useful at the start, before the core drivers of ownership, fit, fidelity, and worth have taken hold.¹¹ That's where Bloom's first teachers spent their approval, and where a sticker chart can do honest work. A streak may get you out the door for your first month of running. By the third month, the run should be doing the pulling.

Point Every Driver at the Object

Competition against your own record or another team. Stories set inside the material. Progress that reports real movement. Streaks that count the work and can be repaired. Comments in place of grades, and feedback in place of prizes. Chapters 10 and 11 work through each driver in turn.

Fade on Purpose

There are four ways to fade a driver without the collapse a broken streak causes.

- **Thin it.** Move from every time to some of the time. A reward after each book becomes a reward after a month of reading, then an occasional surprise.
- **Shift it.** Move from tangible to informational. The sticker becomes a comment about the book; the prize becomes a note about what improved.
- **Move it inside.** Move from adult-given to self-given. The child keeps her own reading log, sets her own target, and decides what counts.
- **Quiet it.** Move from expected to unexpected. Rewards nobody was counting on don't undermine motivation the way promised ones do

(Deci and colleagues, 1999), so the driver can linger as a pleasant surprise after it stops being the reason.

Each move hands a piece of the driver's work to the learner or to the object. The order usually runs from shifting to thinning to moving inside, with quiet surprises at any point.

Watch Who Is Harmed

The same competition or leaderboard that lifts one learner can sink another. The speller at the top of the bracket and the speller knocked out in the first round sat through the same bee. Reading engagement shows which is happening.¹² A driver that works for the room can be failing a third of it.

Mind the Direction

The same tools power manipulative design. Streaks, progress bars, and near-neighbor boards were refined in apps built to hold attention for its own sake. A driver that leads toward the learner's own ownership serves the learner. One that keeps them hooked serves someone else.¹³ The difference can be read with the tests above. A product built for capture is one designed to fail the removal test.

Outside Drivers in Inquiry and Practice

The three families fit the two systems differently, and the next two chapters test the fit driver by driver. In brief, the book's hypothesis is this. Structure suits Practice, where repetition is where attention flags. Story suits Inquiry, which runs on a question the learner owns. Other people serve both. The full map, with every driver placed, closes Chapter 11.¹⁴

• The Long Run

The evidence is mostly short. Most studies of outside drivers measure days or weeks. The few longer ones find effects fading or reversing as novelty wears off, and Chapter 11 looks at one of them, a semester of points and badges.

The book's prediction. Drivers that point away from the object should raise short-term measures (effort, time on task, scores) while weakening retention and attachment later. Drivers that point at the object should compound, because they hand the learner over to the object's own pull.¹⁵ The prediction is testable: follow learners for a year or more, and measure what they do when the drivers stop.

Much of what you use every day runs on short-term structural drivers: the badges in the app, the stamps on the coffee card, the quarterly ranking at work, the due date on Friday. If the prediction holds, those systems are trading later curiosity for compliance now, and nobody is keeping the books on the trade.

Next June the library will post its chart again. It could count pages instead of books, so that a long novel counts for what it is. It could pin the children's own recommendations on the wall, a sentence each about why, for other children to find. It could skip the pizza, or keep it as a surprise for nobody in particular. The girl might read fewer books in July. She might also still be reading in October, like her brother, who is on the third volume now.

• Open Questions

- Which outside drivers most often turn capture into engagement, and how long does the handover take?
- Can a driver be withdrawn gradually without triggering the collapse a broken streak causes? Which of the four fades works best, and in what order?
- Can introjection, the anxious achiever's stop, be converted into identified or integrated motivation without first losing the persistence it buys?

- Does the long-run prediction hold: short-term gains from drivers that point away from the object, and weaker retention later?
- Can software read the attention and quality tests reliably from ordinary logs, without questionnaires?

If you've watched an outside driver hand a learner over to the work, or watched one fail to, I'd like to hear about it.

📌 Notes

1. See Chapter 4, "What Drives Engagement."
2. See Chapter 4, "What Engagement Is."
3. See Chapter 8.
4. See Chapter 5; Chapter 8; Chapter 10.
5. See Chapter 8, "Evidence From Childhood."
6. See Chapter 7.
7. See Chapter 3, "The Rhythm: From Loop to Spiral."
8. See Chapter 10, "Belonging."
9. See Chapter 8, "Reading Ownership."
10. See Chapter 8, "Evidence From Childhood."
11. See Chapter 4, "What Drives Engagement."
12. See Chapter 4, "Reading Engagement: Zoom and Aperture" and "Proxies for Engagement."
13. See Chapter 8, "Seeding Ownership."
14. See Chapter 11, "The Whole Map."
15. See Chapter 5, "Desirable Difficulties."

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Alfred North Whitehead, "The Rhythmic Claims of Freedom and Discipline," in <i>The Aims of Education and Other Essays</i> (1929)	Epigraph

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