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ARTICLE | MASTERY-BASED LEARNING | FOR TEACHERS & SCHOOL LEADERS

What people get *wrong* about mastery-based learning.

Persistent misconceptions and the more honest argument for what a mastery-based system is actually trying to do.

Khan Schools Network · May 2026 · 10 min read

Mastery-based learning is one of those ideas that almost everyone in education has now heard of, and almost no one agrees on the meaning of. Most of the disagreement, in our experience, isn't disagreement at all. It is people arguing about different things using the same words. What follows is an attempt to sort out the most persistent misconceptions and to say, as plainly as we can, what mastery-based learning is actually for.

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NO. 01

"It means students work at their own pace."

Flexible pacing can be a feature of mastery-based learning, but **it is not what defines it.**

In many MBL classrooms, the whole class moves through content together on a shared timeline. What makes those classrooms mastery-based isn't that students go at different speeds. It's that when the class moves on to the next unit, students who haven't yet demonstrated mastery of the previous one don't simply lose access to it. They continue to receive instruction, feedback, and opportunities to show what they know alongside, not instead of, the new content.

> THE BETTER QUESTION
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> *Not* **"do students work at their own pace?"** *— but "does this system keep the door open, and does it keep working with students who haven't gotten there yet?"*

NO. 02

"It requires technology."

It doesn't. This myth persists because many of the schools that have scaled MBL most visibly use adaptive platforms, digital progress tracking, and learning management systems. Those tools can make it easier to manage ongoing assessment across a wide range of student progress. **They are not what makes a school mastery-based.**

The essential elements of MBL — clear learning targets, meaningful evidence of understanding, and genuine opportunities to reattempt — can all be implemented without a platform. Teachers have been doing it with portfolios, rubrics, paper assessments, and structured revision cycles for decades.

That said, as classrooms grow and the range of student progress widens, tracking who has demonstrated what becomes genuinely difficult without some system to support it. Technology can help solve that problem. *It doesn't create the mastery-based learning; it supports the humans doing the work.*

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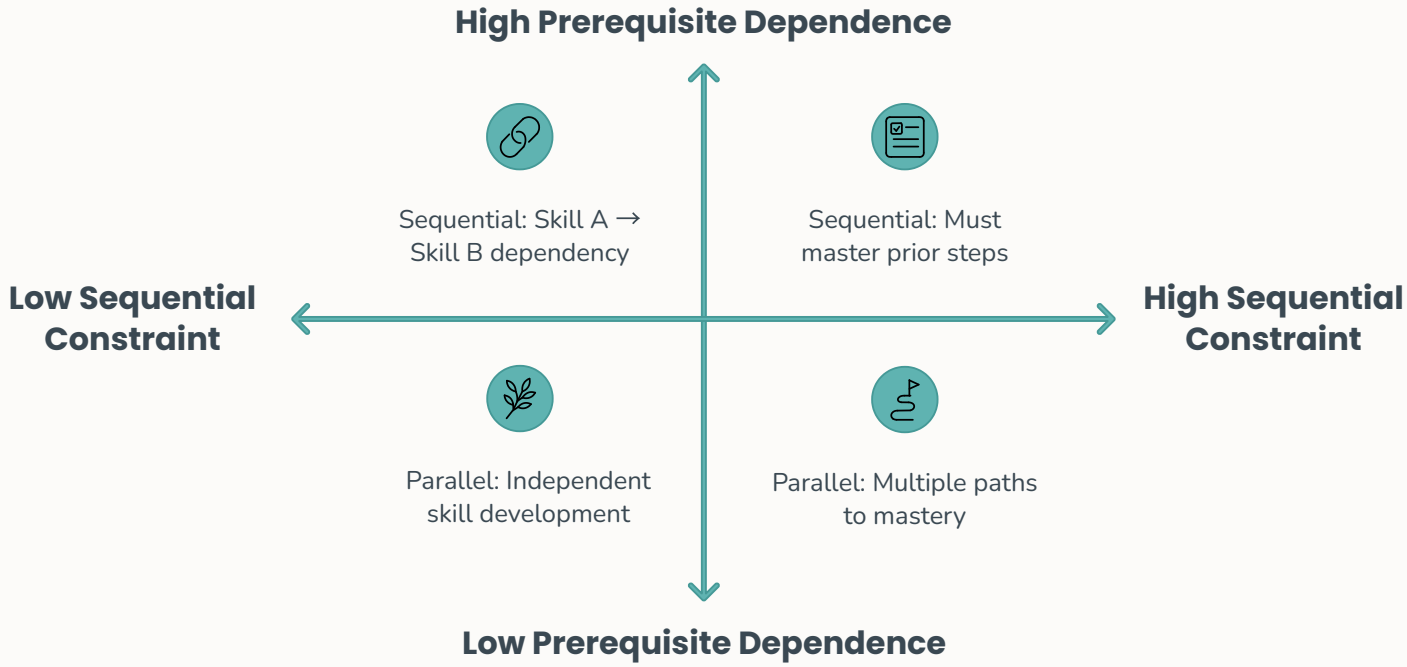
NO. 03

"Students can't move ahead until they've mastered absolutely everything."

Mastery doesn't mean perfection. **It means demonstrating sufficient understanding to build on a concept in future learning.** What 'sufficient' means depends on the skill, the subject, and the learning progression, and that's exactly the kind of judgment call that well-designed MBL asks teachers to make.



Some skills are genuinely prerequisite: a student who hasn't mastered single-digit multiplication will struggle with long division. Others are more parallel: a student can deepen their understanding of theme in literature while still working on close reading. The sequencing of mastery requirements should reflect *the actual structure of the discipline*, not a blanket rule that everything must be complete before anything new begins.

The design challenge here is real. Determining which skills are truly sequential, setting mastery thresholds that are meaningful without being punitive, and building in flexibility for skills that develop over time — these require significant instructional design work. But the answer isn't to abandon the concept. It's to do the design carefully.

NO. 04

"It eliminates deadlines and accountability."

This misreads *flexibility as permissiveness.*

MBL does not remove the expectation that students will demonstrate mastery. If anything, it makes that expectation more explicit and more visible. Every student knows what they're expected to show and whether they've shown it yet. What changes is the nature of the accountability. Rather than holding students accountable for completing tasks by a specific date, MBL holds them accountable for demonstrating actual understanding. **That's a harder standard to game, not an easier one.**

Most schools implementing MBL also set minimum progress expectations, or points by which students need to have demonstrated mastery of certain content regardless of flexibility in timing. These aren't arbitrary deadlines. They're designed to ensure that openness to reattempt doesn't become indefinite drift, and that teachers can intervene meaningfully before gaps become insurmountable.

The accountability in MBL is ongoing and specific. It doesn't disappear when a unit ends. That's precisely the point.

NO. 05

"Teachers don't play a central role."

The opposite is closer to true, and teachers who have moved to MBL often describe it as **the most demanding instructional work they've done.**

In a time-based model, the teacher's primary role is delivery: presenting content to a class moving through curriculum together. In MBL, delivery is often a smaller part of the job. The larger parts are diagnosing where individual students are, designing targeted interventions, providing specific feedback on evidence of understanding, and making constant judgment calls about readiness to progress.

This requires deep content knowledge, strong relationships with students, and the ability to manage a classroom where different students may be working on different things at the same time. It also requires significant planning: designing learning progressions, developing assessments that actually reveal understanding, and building revision cycles that are more than procedural hoops.

None of this happens without teachers. MBL shifts the teacher's role. It does not reduce it.

NO. 06

"It only works for highly motivated students."

This concern deserves a serious response, because motivation is a genuine variable in MBL implementation, and some versions of MBL do work better with students who have strong self-regulation.

But the conclusion that MBL only works for motivated students usually reflects **an implementation problem, not a fundamental limitation of the model.** When students are given unclear targets, inconsistent feedback, and no structured support for managing their own progress, those with strong executive functioning will succeed and those without it will struggle. That's true of most instructional approaches.

MBL implemented well includes explicit scaffolding for the habits students need: how to read a mastery progression, how to use feedback, how to ask for help, how to manage time when the structure is more flexible. These are taught, practiced, and supported — not assumed.

There is also an argument that MBL can be particularly beneficial for students who have historically been written off in more traditional systems: students who learn at different rates, who need more time on foundational skills, or who have experienced years of falling further and further behind because the curriculum moved on without them. **MBL, done well, doesn't leave those students behind. It makes the gap visible and addresses it.**

NO. 07

"Traditional grading isn't compatible with it."

The underlying tension is real. Letter grades that average performance over time obscure whether a student has ultimately demonstrated mastery. A student who struggles early, revises, and demonstrates strong understanding by the end of a unit deserves a different signal than one who coasted to a B and moved on. *MBL asks: what does this student actually know and can do? Instead of: how did this student perform on average?*

But the two are not categorically incompatible. Many schools using MBL have found ways to translate mastery-based evidence into traditional grade reports using standards-based scales that map to letter grades, or reporting both a traditional grade and a mastery profile. It requires intentional design and often involves negotiating with district or accreditation requirements. **It is not a reason to avoid MBL, but it is a real implementation challenge that should be planned for honestly.**

NO. 08

"Students only work alone."

Collaboration is not just compatible with MBL, **it's often central to it.**

Peer feedback, small-group problem-solving, and discussion-based learning are all legitimate ways for students to develop and demonstrate understanding. In many MBL classrooms, students who have recently demonstrated mastery of a concept are well-positioned to support peers who are still working toward it. This is a dynamic that benefits both the student explaining and the student learning.

What MBL does change is the *structure* of collaboration. Rather than collaborative work happening on a fixed schedule for all students simultaneously, it tends to be more intentional and targeted, organized around where students are in the learning progression rather than where the calendar says they should be.

It also opens up time for **richer, more human experiences** in the classroom. If routine instruction and practice can happen outside of face-to-face time, teachers are forced to ask a more interesting question: what is the best use of time when we are all in the same room together? Often, the answer is deeper discussion, collaborative problem-solving, creative projects, or moments of genuine intellectual surprise. These are the kinds of things that are difficult to replicate asynchronously.

NO. 09

"It's only for STEM subjects."

MBL emerged most visibly in mathematics, where skills are sequential and it's relatively clear when a student has demonstrated mastery, and it remains most common there. **But the model is not subject-specific.**

The core requirements for MBL in any subject are the same: clearly defined learning targets that describe what understanding looks like, assessments that provide meaningful evidence of that understanding, and a commitment to giving students repeated opportunities to demonstrate it.

These can be designed for writing, historical analysis, musical performance, visual art, physical education, and any other discipline. The design work is different — it's harder to define mastery of a persuasive essay than mastery of solving a quadratic equation — but *harder is not the same as impossible.* Many schools have built rigorous mastery progressions in humanities and arts, and the feedback students receive in those contexts is often more substantive and useful than what more common grading provides.

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CODA

What's actually *hard* about it.

Clearing up misconceptions doesn't make mastery-based learning easy. The genuine challenges deserve to be named as clearly as the myths.

- Designing mastery progressions is harder than it looks. Deciding which skills are truly prerequisite, what threshold counts as mastery, and how to sequence a discipline so that the progression reflects how learning actually works — this takes **time, content expertise, and significant iteration.**
- Building a culture where reattempts are the expected pathway (not the remedial one) is a longer project than changing a policy. Students who have spent years in systems where a grade is final, and teachers who have spent years operating that way, don't shift their mental model overnight. It has to be **modeled, practiced, and reinforced** over time.
- Managing a classroom where students are at genuinely different points in a progression is more complex than teaching to a single track. It requires **stronger systems**, more intentional use of small-group time, and a teacher's ability to hold a clear picture of where every student is and where they need to go next.
- And fitting all of this into grading and reporting structures that schools don't fully control — transcripts, district requirements, accreditation standards — sometimes takes **real institutional negotiation.**

These are not reasons to avoid mastery-based learning. They are reasons to go into it with eyes open, to build the infrastructure before announcing the philosophy, and to measure success by whether students who previously fell through the cracks are now getting back in.

> THE REAL ARGUMENT
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> *The argument for mastery-based learning isn't that it's easy. It's that it's honest. It takes seriously the idea that students learn at different rates, that a single attempt is rarely sufficient, and that a school's job isn't finished when the calendar moves on. It keeps the door open.* **That's a harder system to build. It's a better one to be in.**

ABOUT

Khan Schools Network publishes practical resources for educators working in or moving toward mastery-based learning environments. More at khanschoolsnetwork.org.