



177. Teaching Students with a Focus on Mastery in Education with Marcy Raymond

Marcy Raymond: [00:00:00] There are some things that we really want to make sure that students can utilize in the future. The future could be in the next course, or it could be in a problem, or it could be in career. Or we don't all know all of those things. But there are some things that we as instructors know that students have to have that ability to divide. They have to have that ability to be successful in almost any endeavor once they get out of their K12 environment.

Annalies Corbin: [00:00:32] Welcome to Learning Unboxed, conversation about teaching, learning and the future of work. I'm your host and Chief Goddess of the PAST Foundation, Annalies Corbin. We know the current model for education is obsolete. It was designed to create fleets of assembly line workers, not the thinkers and problem solvers needed today. We've seen the innovations that are possible within education, and it's our goal to leave the box behind and reimagine what education can look like in your own backyard.

Welcome to today's episode of Learning Unboxed. As always, super excited because we get to have conversations with incredibly innovative educators from around the world. And today joining us is Marcy Raymond. Some of our listeners will recognize that name for a couple of reasons. First and foremost, because Marcy was actually the very first Learning Unboxed episode that we did when we launched the program way back when. So, Marcy, welcome back to the program.

Marcy Raymond: [00:01:33] Thank you. Thank you for inviting me.

Annalies Corbin: [00:01:35] So that first episode we were talking about, Marcy starting a STEM school, in fact, the very first STEM school in the State of Ohio. And we spent a lot of time in that conversation just talking about the ins and outs and what does it take to really start innovative school programs. And since then, just to sort of provide some background for our listeners, Marcy has gone on to actually either start several additional schools or to transform existing schools to be high quality, fully applied STEM schools, whatever label that you want to put on it. She also spends an awful lot of time coaching across multiple states in terms of thinking about educational transformation and innovation in educational spaces.

And today, I asked Marcy to come, have a conversation with us about a concept that comes up over and over again in that transformative school space, and that is around Mastery Learning. So, Marcy, we are ready to dig in about this concept because we get lots of questions about Mastery. We talk about it all the time it passed. And full disclosure, after Marcy went off to do all those amazing things with all these schools, PAST Foundation stole her.

So, for our listeners, Marcy is now part of the PAST Foundation tribe. She is our Chief Strategy Officer and

she's the one that deploys our teams in professional development with all of those incredible school partners that are out there around the world. So, Marcy, what's this thing called Mastery Learning?

Marcy Raymond: [00:03:14] So it's kind of what you would think of. If you say you've mastered something, you have all of the skills, the dispositions, the necessary ingredients to do something well. And because you know that you can do it well, you can repeat that task or that skill over and over and over again with a high degree of quality. So really what it is, is when we're learning, when we have mastered something, we have the ability to be able to utilize that skill or that knowledge to be able to apply it in lots of different settings to analyze whether or not it's the right construct to use for a problem, and then to evaluate how effective we were in solving it.

So when we talk about Mastery and we talk about Mastery in schools, it is that cross-cutting desire for all educators to have their students to be able to do work outside of the classroom based on what they learned inside of the classroom. So they've mastered it in a way that can cause the confidence of the person who learned it. They are confident enough to be able to replicate the skill or the knowledge in any different setting. So, for instance, if I'm in geometry and I learned how to calculate an angle, and as an adult, I'm trying to figure out what the angle needs to be for crown molding, I can do that because I had mastered the technique of being able to calculate that angle.

Annalies Corbin: [00:04:47] So how is this notion of applying Mastery Learning into sort of the new and modern iterations of what we think about as school? How is that different than just I go to class, and I learn a thing? Why do we have to have a conversation that's different than it was before, I guess? Help us understand why this is such an important topic.

Marcy Raymond: [00:05:14] So I think that the nuance that we're talking about here is the duration of time by which the student needs to carry that knowledge or skill forward. If we've mastered something, we should be able to draw upon it at any time, and it might not --

Annalies Corbin: [00:05:29] And over and over again, right?

Marcy Raymond: [00:05:30] And over and over again. Right. So it might not be that every concept that you teach in school needs to be mastered, but those really important things, those things that can help you later in life, in your career, et cetera, those are the things that we want to master. So we're looking at the length of time. In a traditional classroom, we can give information to the students. They do a quiz, they do a project, they do a lab, and then they take an exam on that particular content and then maybe they have a final exam at the end of the term or at the end of the school year.

So that's kind of a traditional approach to it. And what we don't know is if the student has learned those kinds of concepts or those skills longer than to that test. So we're looking at that durability of the knowledge and skills over time and that repeated behavior with regard to that knowledge and skills over time. And there are some things that we really want to make sure that students can utilize in the future. And it could be -- the future could be in the next course, or it could be in a problem, or it could be in career. Or we don't all know all of those things, but there are some things that we as instructors know that students have to have that ability to divide. They have to have that ability to be successful in almost any endeavor once they get out of their K12 environment.

Annalies Corbin: [00:06:56] Yeah, absolutely. And we know that it's critically important. So but we also know, because you and I have been doing this for many years now, combined way too many years probably. We won't even say that.

Marcy Raymond: [00:07:09] We don't talk about age.

Annalies Corbin: [00:07:11] Right. Yeah. Holy moly, let's not go there. But the reality is we've been doing this long enough and we've seen multiple iterations of that concept or the idea of bringing Mastery Learning in as an instructional strategy into school environments. And what we know is, one, there's a lot of confusion about what it is, how to do it, how hard it is to do, how beneficial it is to students and how do you measure it, right?

So let's start with the first one. We talked a little bit about what the concept is. Let's talk about what does it look like when you actually try to implement it into a school, because that's where suddenly people are like, yeah, I'm all in. I want students and nobody's going to disagree that we don't want students to master content, right? To be the owners of that domain. That is not something they learned out of a book. You know, a student that has Mastery of Concepts.

They can teach that concept to anyone. They can teach it to older people. They can teach it to their peers. They can teach it to younger people because they can distill it down. That's true mastery. We have the skill set because our understanding and knowledge runs that deep, right? So we can apply it in multiple scenarios, all those pieces and parts. However, it's still one of those things that schools really, really wrestle with. So what's that all about?

Marcy Raymond: [00:08:41] Well, I think it's about kind of that conceptual framing of growth. You want to make sure that learning is an iterative process. And I think the first thing that I would say is that people in the school need to have a framework of growth mindset for every single student, meaning that students can learn the foundational materials, the formative materials, the skills, the knowledge. They can learn that, but some kids will take longer than others. So that's a fundamental criteria of the mindset. So if we're a growth mindset, we believe that you can learn, but it might take some people longer than others to learn that same skill or concept.

So if we fundamentally believe that everybody can learn, then that's the first thing I would say is necessary for a Mastery Learning environment to foster, to be fostered. So when we think of this, we're also thinking about the efficacy of the student to see themselves as capable of learning. So in Mastery, we're not trying to say you got it for today, but you didn't get it tomorrow and you didn't get it the next day, so you're out, you're done. It's about saying, okay, we didn't get it today. What are the things that are -- what are the misconceptions that you have that we can work on? How do we figure out what you need in order to be able to do it and then move forward with that? It's a personalized learning approach.

So the first part of it is having a growth mindset and believing that all kids can learn. And the second part of it is really thinking about, okay, so we're going to give multiple iterations of ways to learn it depending upon what the student themselves need. So that's personalization. I think when we look at resiliency, we're looking at the ability of a student to produce even in struggle. And if we have mastering, the expectation is that all students who have mastered, I'll just take chemistry as an example because I happen to have taught that. But if I'm looking at chemistry and I'm looking at those durable things, those foundational things that all students should learn, then we also have to think about, okay, how will I assess whether or not they have learned it?

And in that case, we go back to research, and we look for multiple ways of assessing a student with regard to their ability to have mastered that material. So I'll take the concept of acids and bases. So we want every citizen to understand that acids can burn you and bases can burn you. And that when you have a really strong acid, a really strong base, you're going to get an explosion. Like those are fundamental things, right? We want everybody to know those particular.

Annalies Corbin: [00:11:33] Super important, don't mix these items in your kitchen.

Marcy Raymond: [00:11:37] So if those are some of the things that we want to make sure and I'm being a little bit light on the content side. But if those are some of the fundamental things that we want the kids to know and be able to do, then we should give them multiple opportunities to be able to prove that conceptual frame or that skill that they have it. So like if they're balancing an equation as an example, that's part of what I was just describing. If they can balance the equation, I'm not going to give them 47 ways of balancing the equation. I'm going to ask them to prove that the equation is balanced. And so I'm asking it in a different way. So then I have some other ways of knowing whether or not that student can, in fact, balance that equation.

If I look in social studies and we're looking at the durability of citizenship, it isn't that I want them to memorize the text of all of the amendments, but I do want them to understand what amendment means, how an amendment is made, and then what happens if an amendment is something that we don't want to actually have? What does the legislature do? What does the executive branch do? What do each of the pieces and parts of government do when this happens? Because over time, culture changes, expectations change. What is okay now might not be okay tomorrow. So how do we as a democracy figure that out?

So we want kids to have those durable understandings. And to have those durable understandings, we sometimes want to look at multiple ways of knowing. Can they display it in a paper pencil test? Can they display it in a writing, in a piece of writing? Can they display it in a performance? Can they display it at city council? So there's a lot of different ways to check on the ability of the student to know. We should really try hard for a student who is struggling with one way of doing it, to allow them the opportunity of another way of proving it so that we have that confidence that those durable skills are learned.

When we look at grading, we're looking -- sometimes I hear, oh, well, we need to do standards-based grading, and that's the same as Mastery. Well, it kind of isn't, but it is. Standards-based grading is a foundation of Mastery, but it isn't all of Mastery. So it's its kind of a part, but not the whole of Mastery. So when we are doing standards-based grading, for those of you out there who are familiar, standards-based grading is where we're looking at a standard and a performance against that standard, either in a paper-pencil or performance. We're looking at performance against that standard.

But in Mastery education, we aren't just looking at performance against the standard, we're looking at performance in the application and the analysis and the evaluation. And so we're looking at a higher level of thinking with regard to that particular standard. So that's where we have people kind of overlap, then say one is the same as the other. They work together, but a standards-based grading system doesn't in itself provide Mastery Learning because those experiences are not always involved in the standards-based grading.

Annalies Corbin: [00:15:07] Correct. So that's one of those key components that really sort of helps kids understand how to take what they learned and apply it into completely different scenarios. And I think that was one of the things that always appealed to me from a Mastery Learning standpoint is if that kid can recognize, hey, I learned a thing and now I can apply that thing I learned to completely different scenario, to solve a completely different problem, or to make a completely different contribution to a conversation, or take your pick that, suddenly that's not just the light bulbs going off. That's an entire case of light bulbs actually having application.

Marcy Raymond: [00:15:46] Absolutely. And sometimes it'll show up. That light bulb will show up and the kid didn't even realize that it showed up, they just could do it.

Annalies Corbin: [00:15:55] That's the bets part.

Marcy Raymond: [00:15:56] Right? That's the ultimate. Like, I don't know how I knew how to do it, but I know how to do it, you know?

Annalies Corbin: [00:16:01] Yeah, yeah.

Marcy Raymond: [00:16:02] There are some steps that I think the listeners, it might be familiar, but in this context, there's some steps to what I would say is good Mastery practice. Should I go over some of those?

Annalies Corbin: [00:16:15] Such as? Yeah, absolutely. Such as?

Marcy Raymond: [00:16:17] Okay. So I think formative assessment is really important. I think that the instructor needs to know what of the course material or skills or concepts does the student already know and at what level. So if the knowledge and skills are already there and the comprehension is already there, then there's no need to really work hard on delivering that kind of a strategy with the students. We can move on into application, evaluation, synthesis, et cetera. So I think pre assessment is a really important attribute of instructing under a Mastery system.

Once you have the instruction, you need to have multiple ways to exhibit competency. Meaning that it shouldn't just be in like a paper pencil, yes or no, binary way, because that doesn't give you the depth of knowledge for the student. You need to be able to assess it through writing. You need to be able to assess it through performance. You need to be able to assess it to the solution of a problem that is kind of hairy and messy and maybe a variety of different solutions are appropriate for that particular problem. And we need to have the instructional pedagogy to go with that, right, so that we can help the students to be able to have lots of experiences throughout the instructional practice.

I think that the practice then, you're looking formatively again. So formative assessment goes all the way through, but you look again at, okay, where is everybody right now? And now how do I have to personalize for the kids who haven't mastered it? And so that's where you have enrichment or intervention for the students that have not yet demonstrated Mastery.

And then the final is what is the culmination that can give the students enough confidence to say they've mastered it. So whatever that summative assessment is, then that can help to determine the level or the degree of confidence in being able to do that particular thing.

Annalies Corbin: [00:18:25] Yeah. And as schools wrestle with this, because all of those elements, I mean every single place we worked and had this conversation, they go through, they think about right, and those elements always come up. And yet we know that as schools or classrooms try to make this shift, because Mastery Learning is better for kids, it doesn't have to be every day, all day, all the time. Although you can get there, you know, as a school or as an institution, and it can become sort of the baseline of the culture of your teaching and learning strategy.

It's work to get there. We know it's a lot of work. It's way -- or people believe that it's way easier just to follow a standardized curriculum, to give a test, mark a grade and move on. And yet we know that the reality is it's actually not easier in the long run or in the long term. And it's certainly not best for kids. But I also want to acknowledge it's hard. This is not an easy transition. So, you know, Marcy, you've seen a million of these. So what are the stumbling blocks? What is the thing that you hear over and over again about either why we can't do this, or we've tried it and we've bumped up against a wall?

Marcy Raymond: [00:19:47] So I think the first thing that comes to mind is persistence and resilience. And so the teacher says to the student, hey, I want you to master this, I'm going to give you more time in a different way of demonstrating it. And the student procrastinates and procrastinates and procrastinates. If the teacher doesn't have any check-ins, then that procrastination is allowed to proliferate. And then the teacher gets frustrated with the student because the student has it on their own, come back with what it is that they're going to be doing.

And what it points to is a lack of scaffolding that the student doesn't have. Excuse me, the prerequisite scaffolds to be able to do it and or the right benchmarks to help move them along the scaffold. And so I think that thinking about scaffolding is another layer of the instructional pedagogy that needs to be built in to the planning so that you don't have to constantly like when one student stumbles and another doesn't, you don't have to constantly be making up something new, that you have some things that you've already thought about for a student, if they come to a barrier that they can do this and help the student along with benchmarks and scaffolding where needed. I think that that part of it is a barrier because it takes time and it takes a lot of preplanning to be able to do it on the fly. So I think that's one of them.

I think another one is the students, this is still in the persistence and resilience kind of venue vein. But the students who say, I'm not doing it, I'm not doing it, I'm not doing it, I'm not doing it, I'm not doing it. And you give them all the opportunities and they still say I'm not doing it or they're passive and they just don't do it. And in that particular case, if we say, okay, by the end of the term, I'm going to give you a grade, that grade is going to be enough. Then actually the student was more persistent in that example than the instructor, because they said they weren't going to do it. They didn't do it. They got an F and now they don't have to do it unless they have to retake that particular class.

So I think that youth in their stubbornness, they know that they can sometimes outlast adults and they try to figure out how long I can do it for, how long can I outlast. And thinking of that ahead of time and knowing that that is, especially for teenagers, that is a mindset that teenagers, they're efficient beings. They want to do the minimum, I'm out, necessary. And so in order for you to counteract that, then those accountability structures and strategies have to come in play. The scaffolding helps with that, interventions with parents and et cetera, but it does take work. And if you don't put the time into it early, the time will get away from you later.

Annalies Corbin: [00:22:52] A hundred percent. And it's a cultural shift, right? Fundamentally, that's one of the single probably biggest things I would argue that listeners need to truly understand. If you're talking about a cultural shift in the way you think about the value of teaching and learning and the processes by which you engage in that endeavor in many respects. So it's really interesting because I heard a principal one time explaining to a teacher, I'll never forget this, sitting in on one of those coaching and PD sessions, and I'm not going to say where, what state, what the school was in, but I was struck by this because this principal was trying to essentially talk a teacher off the ledge who had been trying, trying, trying, right, with Mastery, was struggling with all the things you're talking about. It wasn't part of the culture of the school. This was a new thing. Those wily teenagers were being persistent, just not the persistence that the school or the teacher or the administrators were looking for, but they were super persistent. You know, you've got to give them A plus in that space. Right.

And this administrator said to the teacher, look, here's the thing, Mastery Learning is non-negotiable. It's a non-negotiable for you. It's a non-negotiable for the student. It's a non-negotiable for the parents, for the families. So if Mastery Learning is going to be a non-negotiable in our school and our classroom and I'm not even suggesting that that was the right conversation being had. I'm just saying this with conversation I heard. If in fact Mastery then is going to be a non negotiable, how do we all move forward? And as you --

Marcy Raymond: [00:24:32] Well, it's gonna take a while.

Annalies Corbin: [00:24:32] Yeah, it was met with crickets, right? There's a lot of crickets. And ultimately, truth be told, it took several years of slow, meaningful, well-designed baby steps to get everybody to get on board, to the point the culture itself shifted around what are the minimal requirements as a school for us to truly measure student success, right? And that's a tough, tough space to be in.

But, you know, it's an interesting conversation. And I guess that one of the other questions that I have for you, because we bump up against this one all the time too, is around so once we understand Mastery and once we sort of set ourselves with a plan on how we believe we're going to be able to get there, there's some intriguing decisions that have to get met. And one school's Mastery isn't another school's Mastery. So how do we reconcile with that? And as a school, as a classroom, as a community, how do you decide where we put the minimal limits as it relates to Mastery? You know, one school can choose Mastery at 70 percent. Another school can choose it at 90 percent, everything in between and well above beyond. How does that reconciliation come about?

Marcy Raymond: [00:25:53] So I think that when we say the percentage, we're looking at the difference between -- we're trying to bridge an old and a new system. And that bridge, I mean conceptually, everybody should agree that, oh, Mastery is important for students to be able to move on to the next course or the next grade. The monitoring of Mastery is another concept in total, right. The monitoring of it is where you get people saying, oh, well, I'm going to look at the traditional grading and then if they have 70 percent or higher, then I'll say that they've mastered. Well, then everything that you're grading needs to be against those durable skills and knowledge that are necessary to move on to the next thing.

And so have you -- the question becomes, have you looked at your curriculum to have determined exactly what those performances are going to be for each of those? I've heard it called, oh, what do they call it? Power standards. So if they have power standards, that's totally fine. But what is it that you're going to measure to know whether or not they have mastered it? It can't just be on a quiz or a test where they pick the right answer. It has to be something more than that in order to be able to prove that Mastery has occurred.

So what would be required is that there's an agreement across all the teachers who teach a particular grade level or content that these are the Mastery requirements, no wiggle. Everyone has to do this in order to move on. And some kids will do it very quickly and some kids will take a longer period of time. So we're flipping on its end what the traditional system does. The traditional system says I have a semester and at the end of the semester, it's either a go or a no go based on how you did percentage wise on all the things that were available. And if you are no go, you're an F, then you either have to retake it or you get an F forever for that.

For a Mastery system, we're saying that we're not going to stop at the time, but we're going to say that you can't get below this performance level, whatever that performance level is. And what I've seen is that some schools who are really fearful of students not being able to perform because of needing different amounts of time that they trend toward setting a percentage and using kind of that bridge between old and new systems. But a true Mastery system would say you've accomplished Mastery of all the things that we've agreed upon that were durable and necessary to be able to move on to the next thing, grade level or whatever, that okay, you mastered it, now we're going to go into this. And to see how much Mastery could occur for that particular student.

So you're shifting the, I guess, from ability-based aptitude in a time-based world to everybody has the ability, but it's no longer a time-based world. Now, there are constructs to that, of course, age restrictions and all of

that kind of stuff. But we want to take the perceived intelligence in a time limited way. We want to take that off. That's not fair to a kid for an adult to perceive what their intelligence level is based on how they're performing on this test. We need to instead look at what is it that we need to do in order for the aptitude to be displayed.

Annalies Corbin: [00:29:52] Yeah. And we have to recognize that every kid's journey is going to be a little bit different, right? In one course, the kid's going to sail through. In another course, kid's going to struggle with. We always talk about math, right? We always pick on poor math. And we say not everybody is great at math. Well, that's not actually true. Everybody can be great at math. The problem is we've not provided the opportunity for everybody to be great at math. Because we've said you have to figure this out and you only have two days to do it, we're moving on to the next concept. Instead of we're going to take as much time as it takes to make sure you're great at math.

Marcy Raymond: [00:30:33] So the really interesting thing is that if you're really good at doing it, so for me, teaching a class and I have assessed in lots of different ways where everybody is formatively, I have kids that are doing Algebra 1 in two months. I have other kids in Algebra 1 taking all year, but I didn't have anybody in Algebra 1 taking longer than a year. So the traditional paradigm of you get one course done in one year, one credit course done in one year, we still met that. But a lot of kids got three done, three math courses done in a year instead of just one in a year. So it helps. It benefits on both sides of the equation. If a kid is already able to do it, let's go ahead and let them go on.

Annalies Corbin: [00:31:25] Yeah. Please. Dear goodness, let's just move on. Life is short.

Marcy Raymond: [00:31:29] And if a kid struggles, then we'll give them more time and more personalized attention to trying to diagnose what it is that the misconceptions are keeping them from being able to master it and then let them move on. But it really doesn't take longer than what you normally would have, right?

Annalies Corbin: [00:31:43] Correct. Correct. That's one of those big old, giant, audacious myths that's tied to all of this. I completely agree. And I thank you very much for bringing that front center, because it is one of those things that I think we hear all the time. And we just know that it's actually not true.

So I always like to wrap the conversation, recognize that folks are out in the world. They're listening to us have this conversation and they're thinking that's great or yeah, but. And so I always want to sort of wrap with recognizing that folks are thinking that way. And so, Marcy, if somebody is listening to this and they're like, okay, I get it now, I want to be a teacher that uses Mastery in my classroom, or I want to advocate for my school or my community to make this shift. What is the one piece of advice that you have for me as I start to prep myself to go down this journey?

Marcy Raymond: [00:32:37] Formative assessment of student progress is your best friend. That's the one piece of advice that I have for you. If you keep looking at what they're able to do, you'll be able to see avenues of acceleration. You'll also be able to see avenues where intervention is required.

Annalies Corbin: [00:32:55] I agree, hundred percent. Thank you, Marcy, very much for taking time out of your day, your busy schedule to join us and to share with us about your experience as it relates to Mastery Learning. We appreciate you.

Marcy Raymond: [00:33:07] It's my favorite topic, so I'm happy to be here. Thank you for inviting me.

Annalies Corbin: [00:33:11] Absolutely. Thank you for joining us for Learning Unboxed, conversation about teaching, learning and the future of work. I want to thank my guests and encourage you all to be part of the

conversation. Meet me on social media at [@annaliescorbin](#) and join me next time as we stand up, step back, and lean in to reimagine education.