



## Your Class is So Tough: Addressing Academic Rigor and a Growth Mindset

### SPEAKERS

Marie Norman, Tierney King, Lolita Paff

#### **Tierney King** 00:01

This is the Faculty Focus Live podcast sponsored by the Teaching Professor. I'm your host, Tierney King, and I'm here to bring you inspiration, energy, and creative strategies that you can utilize in your everyday teaching. Have you ever had a student say, "Wow, this class is so hard!" or "These homework assignments are impossible!" Many students might even do their own research before registering for your class, trying to determine what the workload might be, or what the level of difficulty is. For this reason, it's important to understand how you can communicate your definition of academic rigor, and ensure your goals are aligned with the expectations of your students. In this episode, we'll go through the research on growth mindset, we'll cover how you can foster growth mindset in your own course to improve learning, and how you can make connections with your students to emphasize the task at hand, and then we'll cover specific strategies to inspire students to keep on trying, even when it gets tough. To start Lolita Paff explains how to maximize your expectations of rigor, and learning by clearly defining them in this program, Aligning Student and Faculty Perceptions of Rigor.

#### **Lolita Paff** 01:15

Students are concerned about the level of the difficulty and the workload. And we generally view those as functions of higher education in order to learn work is required. So in essence, I get those weird comments from students on the feedback or I get a student who has the nerve, the boldness, to ask is this an easy A, because our perspectives are vastly different about what is supposed to be going on in the learning experience. And until I got to a point where I could appreciate that and say wait a minute, we're not on the same page. And because we're not on the same page, the relationship is not going to be as effective, we're not going to maximize the experience until our definitions of rigor and our expectations of rigor and learning are more closely aligned. So, so much of what happens in any given class is a blending of what the teachers beliefs and expectations are that are being brought into the class as well as what students are bringing in in terms of their experience in prior learning environments. How tied is this to having a growth mindset? I think it's tied to it a great deal, right? So sometimes students don't do well, because they aren't working hard enough. So they're either working insufficiently, or they're not working smartly. Sometimes there's sort of a mindset that they've brought in that I'm not good at math, or I'm not a good writer. And the growth mindset piece, I think, is important if we give them strategies and low risk situations for them to practice. It was mentioned earlier, the need

for formative assessment, so low risk opportunities for students to practice without significant penalty, so that they can show improvement over time.

**Tierney King 03:11**

So we know that growth mindset is important in determining how much effort a student might put forth in class, in an assignment or during an exam. This growth mindset helps motivate them when the going gets tough. It says "Don't give up just yet." In this next snippet, Marie Norman and Michael Bridges explain the research behind the growth mindset and specific strategies you can implement to help foster a growth mindset in this program, Building a Tougher Student: Applying the Research on Intellectual Development.

**Marie Norman 03:42**

Great. So well, I'm going to start with mindset, which is an area of research that I find particularly fascinating, and some of you may already be familiar with it and familiar with Carol Dweck name and work as Mike said, she's a social psychologist at Stanford, and her research has really focused on how our beliefs about learning affect learning motivation, persistence, resilience. So Carol Dweck got her start doing fieldwork observing children in schools in Chicago, and she focused in particular on 10 year olds, who were given difficult math problems, problems that were just a little bit harder than they could actually handle. And what she noticed watching these students was that they really sort of fell into two clear groups. So there was one group that seemed to kind of enjoy the challenge. They said things like, I'm gonna learn stuff here. I like a challenge. And even when they failed and did not successfully answer the problems, they expressed confidence that they could do better in the future and an eagerness to try again. The second group that she noticed was really unhappy when they were given these difficult problems. When they struggled to answer them, they saw it as sort of proof that they weren't good enough. They saw it as kind of a statement on their identity or their worst. And they often looked around to find somebody who did worse than they did. They expressed an unwillingness to do it again, they said, if we're asked again, we're not going to do it, and they even indicated that they might seek in the future if they encountered those kinds of problems. This led DUAC into a whole career of research looking at how people's mindsets influence whether they rise to a challenge or are defeated by it. And in subsequent studies, she and other researchers actually found that the electrical activity in the brains of students in these two types of groups differed when they encountered failure or challenges or setbacks. So the brains of students in that first group that rose to the challenge and who really enjoyed that lit up when they encountered errors. So when they screwed up, their failure made them more curious it got them thinking is make them want to solve the puzzle. Students in the second group, their brains shut down, there wasn't much activity at all. They seem to withdraw from engagement with the problem. So from this research and research like it, Dweck identified two kinds of mindsets. And these may be familiar to you. So students with a fixed mindset, or fixed mindsets in particular areas are motivated by the desire to appear smart or talented or skilled, they want to perform well. And they have a set of beliefs and characteristics. They believe that intelligence is innate, that it static, you've got interviewed don't have it. They tend to believe that learning should come easily and without struggle. And they get worried when it isn't fast. They have an external locus of control, which is that they don't feel in control of the situation. They believe that factors outside of their control determine their fate. And they tend to focus on obstacles, not opportunities. When you're thinking about which of your students might actually be in this category, you might think about the ones that are very self critical that tear

themselves down or very hard on themselves. Students who avoid risks or unfamiliar experiences who respond to challenges and setbacks with alarm or pessimism who give up easily. These are students who lack flexibility and students who find failure intolerable. So if you think about your students who are just, you know, really rattled when they get their first bad grade and find it intolerable, those might be students with a fixed mindset. Then we've got students with a growth mindset. These are the students in the second group that Dweck noticed. And they're primarily motivated by the desire to learn and the desire to grow and to develop knowledge and skills, they tend to believe exactly the opposite. As students with the fixed mindset that intelligence and talent are developed through effort, that learning requires effort and the struggle is productive, that it gets you somewhere, they have an internal locus of control, and that they feel like they control their fate, and they can determine it. And they focus on opportunities, not obstacles. So these are students who you see being very self-encouraging students who relish risk, who seem to seek out unfamiliar experiences respond to challenges and setbacks with equanimity. Students who persist, even when they encounter setbacks and aren't easily discouraged, demonstrate flexibility and are not devastated by failure. So probably all of you can think of students who are in each of those categories. And we'll come back to that in a minute. And it's important to point out by the way, that these are not types of people. They're types of mindsets. So the same person might have a fixed mindset in one area and a growth mindset in another area. And it might also change with time. But what the researchers in this area have found very definitively is that mindsets are powerful. That mindset affects people's self-efficacy, their sense of competence and ability in the world, their persistence over time in a major or in a program, their resilience, or their ability to bounce back when they don't do well. And ultimately, their achievement, which depends on all of the above. So let's talk a little bit about practical strategies. So that research describes the research interventions that have been tried. But how does that equate to the classroom and what we can do as teachers to help students develop growth mindsets. So one of the things that we can do is rather than make comments like this, well done, you're a natural, you're brilliant, you get A's without breaking a sweat, all of which really feed a fixed mindset. To instead praise participants so good for you for sticking with that, or praise, thought processes and processes of reasoning instead. So praise people for determination, good reasoning, for not giving up for sticking with something or thinking a problem through. Another thing we can do as teachers is to lower the stakes during practice. So I work in a medical school and so the stakes of our students' performance is high. Patient lives are at stake. But if students at the very earliest stages of medical school had to function as if they could kill a patient, they would be paralyzed. And so I think one thing that is really important is to give students low stakes practice opportunities when they're learning something and sort of increase the stakes as they go, but give them a chance to fail and to take risks in an environment where it won't be catastrophic to their grades or their academic careers. Another thing we can do, and this comes directly out of research interventions on values affirmation is in the research when students were given time, even just 20 minutes, to write about what they valued and what their goals were and what brought them to their academic program, and what they really cared deeply about. That 20 minutes of writing, inoculated them against impostor syndrome, over four years of college, that it was a tremendously powerful intervention, particularly for students from underrepresented groups. So asking students to take a few minutes or a half an hour at some point in your program to ask about what attracted them to their field, what motivates them to persist what they really deeply care about, seems to make a tremendous difference in terms of helping people overcome setbacks and foster greater persistence. Finally, and this is maybe one of the most important things is that we can model a growth mindset of our own. Students look to us as models of

professionals and adults. And so it's important to model to them that we're always learning and that we have growth mindset, so we can talk about overcoming challenges, we can help them set more realistic expectations about how long it takes to get good at something. We can describe our own setbacks describe our own growth, and we can solicit feedback from them and show them very concretely that we welcome feedback and welcome opportunities to grow ourselves.

**Tierney King 11:42**

Lastly, as you begin to take into consideration your own academic rigor in your classes, and your own growth mindset, here are a few additional ideas from a Lolita Paff to help increase student applicability when it comes to gauging course rigor and specific strategies to help motivate students in their learning efforts.

**Lolita Paff 12:00**

We need to strive for the appropriate level of challenge for each course and each cohort. And the more we interact with our students, the better we'll be able to see when they're bored, and when they're struggling or overwhelmed, and then adjust accordingly. Applicability is an important filter that students use to gauge course rigor. Real and relevant are the levers that push students to work harder and longer. Students are more willing to work longer and harder when the content matters to them, personally or professionally. And we can help them make those connections. When we emphasize task and not time, we can focus on mastery, and ways to do that include providing study strategies and active learning activities outside of class. Teachers tend to spend a great deal of time mapping out what we're going to do each class period, and each week and each unit and each semester. We need to be as intentional about what happens outside of class as what happens in the classroom. So providing students some suggestions and strategies goes a long way toward mapping the inside and outside of class learning efforts. For example, we can ask students to complete practice problems, and these don't have to be graded. These can be ungraded recommended problems as part of perhaps an exam or quiz preparation. We can ask students to prepare the practice problems and share them with each other, perhaps reward them for a bit of extra credit. We can ask students to rewrite their notes in their own words. In fact, we could ask students to do a note swapping exercise in class, swap notes with your neighbor and rewrite the most important parts in your own words, and then share them with your partner. Students can be asked to complete a concept map, they can look at their notes and create more of a visual presentation instead of a verbal presentation of the learning and concepts that are in a particular unit. These concept maps then provide a different presentation of the material. And we'll help them with recall and retrieval. We can incorporate responses that are more reflective in some of our assignments. So we spend a lot of time asking them about content and application of concepts. We can throw in a reflection question in with some assignments. Sometimes it can be for extra credit, or it can be an integrated part of the assignment. And we can learn about our students learning and they can learn about their learning over the course of the semester, as the scope and depth of the questions that we're asking them to reflect on. change over time.

**Tierney King 14:53**

Whether you're driving to work, or you just need a 15-minute think session, we hope the Faculty Focus Live podcast will inspire your teaching and offer ideas that you can integrate into your own course. For

more information on the resources included in this episode, please check out the links provided in the episode description.