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If Students Are Not Learning to Fail, They Are Failing to Learn

Picture two students. The first student comes home from school parading their 100% test score around, having easily accomplished everything they were tasked with that day. The other student comes home with an air of frustration, having had to struggle through most of their work with occasional triumphant breakthroughs. Their evening is spent stubbornly contemplating a particularly challenging problem with a friend, which the two are eventually able to solve – but only partially. Which student would have learned more? Although the first one may have learned how to pass a test, the skills the second one was developing through productive struggle were much more applicable to the real world. Grit, the ability to persist through failure toward a longer-term goal, is crucial in real-life situations which often do not have an easy, preconstructed solution. Grit can aid students in college and beyond, as it allows students to work through failure effectively and see mistakes as learning opportunities rather than defeats. The communication skills to effectively ask for help are also necessary in a range of scenarios, and are more and more useful as students move away from primary education-style questions with easy answers. As such, struggle in the classroom may sound unproductive or demoralizing, but it plays a crucial role in developing relevant, broadly applicable skills such as grit and communication and is the key to transferring classroom knowledge to difficult real-life situations.

Students across the board should be forced to develop the grit and persistence to wrestle with challenging tasks, but one category of students that especially needs to develop grit is gifted students. Gifted students can easily fall under the radar, as their high academic performance can lead people to think that they do not require any support. However, the way they are left to work through low-struggle assignments with little or no guidance can leave them with no tools in their toolkit when they finally encounter something difficult. In effect, they need to learn how to fail. Teachers at the Art of Problem Solving, a program which places emphasis on a challenging, communication-based approach to mathematics, have seen this play out many a time. Jennifer Greene, a writer for AoPS, says, “Unfortunately, it can be hard for parents and teachers to embrace the idea that they may be failing the bright students who earn 100% on everything.... their first experience struggling in an academic subject may well be a struggle for everyone involved” (Greene). Gifted students tend to breeze through work they are given. This may seem like a positive, but it can cause the development of a belief that everything is easy. With such beliefs, a student’s first brush with failure can be quite demoralizing, with student reactions ranging from the idea that they are “secretly stupid” to a lack of interest in previously loved topics (Greene). This rings true to my own experience with AoPS and challenging work in general. Shifting from the busy work I encountered in a traditional math class in elementary school to problems I could not solve easily was quite an ordeal, and I was often tempted to give up, as I was not used to struggling. Did that mean that struggle was bad for me? No, I simply needed to develop grit. Through wrestling with hard problems, gifted students can learn to persevere when things do not come naturally to them, and that not everything is easy (Greene). They also learn that mistakes do not represent catastrophe, but can instead be built off of. Many teachers support this

philosophy as well. According to Kristen Burns, the math teacher at the Massachusetts Academy of Math and Science, “I would rather see [students] attempt a problem and do it completely wrong than sit there and do nothing” (Burns). A student’s work, even if incorrect, can be talked through and iterated upon to eventually arrive at a solution, often with the bare minimum of teacher assistance (Burns). When developing the grit to deal with hard material, gifted students especially need this opportunity to struggle, to avoid the false dichotomy that their only options are achieving perfection or nothing at all.

Although grit can sometimes be taken too far, it is applicable to every learner when it is taught well. Some argue that grit is hard to measure, and even that “we don’t know how to teach it” (Zakrzewski). Those who support this argument usually stress the relative novelty of grit as a topic in education, arguing that metrics like standardized testing are more useful than trying to find a way to assess a student’s level of grit. Although this presents an opportunity to refine the way we teach grit, it is not the full story. The experimental nature of grit does not override its importance and we can encourage its development even without a formal assessment. The other main complaint is that students do not often know what their goals are, and/or they simply may not have the baseline knowledge they need (Zakrzewski). In these instances, it may not be productive for them to struggle with certain tasks, which could be an overly discouraging experience. These are valid points – struggle without end can cause unnecessary distress. Yet success on challenging tasks promotes an invaluable sense of achievement. Therefore, one strategy is not to take away grit, but rather to foster it in a more supported, collaborative environment.

A shared experience of struggle is essential for students’ developing communication and soft skills, as it creates the ability to clearly help others and explain exactly what help one needs.

When two students are put together, they can complement each other and fill in any “holes” in the other’s knowledge or proof, forcing the student being helped to learn to communicate their thoughts clearly (Burns, Ferlazzo). By having students, rather than teachers, be the first go-to, “they are re-enacting their emerging understandings”, thereby deepening the helper student’s understanding of the material through explaining it in a new way (Ferlazzo). Additionally, teachers can use strategies that do not reveal everything at once. If a group of students cannot seem to grasp a problem, they likely will have made enough progress so that a teacher can suggest an approach to the remainder of the problem, which again gives the students an opportunity to “solidify their understanding” by “[communicating] to someone else” (Burns). Communication is paramount in these circumstances, as the strengths and weaknesses of a solution can often be identified through a written or verbal explanation. Despite this, some believe that communication is secondary to simply finding the answer. One source denies the importance of “justifying, explaining, teaching, and creating... Merely doing math problems isn’t thinking in [productive struggle advocates’] framework” (Buck). This view alleges that solving (presumably low-struggle and formulaic) problems should be prioritized to the exclusion of all else, which may indeed promote high test scores and proficiency with memorized concepts. However, it is clear that there are better aims for education than the conventional, test-worshipping approach.

Many people underestimate students’ ability to deal with challenge, but this deprives students of the ability to struggle in school before immediately applying these concepts to tough real-world situations. Struggle presents an opportunity for the generalization of learning. Burns argues that in traditional math classrooms, “the concepts tend to become very segmented” (Burns). However, by working on a problem with no clear path to the answer, students are forced to

integrate methods from various areas of math, thereby forming connections in their learning (Burns). This blended understanding can then be transferred to real-world problems which require many areas of knowledge to be combined towards a solution, and provides context as to why these methods work. As Burns aptly summarizes it, “in the struggle is where you really grow” (Burns). This kind of synthesis is more important than getting a high score on a test, which again may only measure skill with isolated topics. Some argue that students are not capable of learning from mistakes made during this approach; in essence, that “these methods simply confuse students” (Buck). Marginalized students are especially at risk; the New York Times found that “educators... too often had low expectations for Black and brown students” (Anderson). Therefore, teachers often underestimate the skills of marginalized students (and indeed, students in general) and intervene too early in the struggle process, which “can cause those students to lose interest in learning; they get relegated to lower-level material and fall further behind” (Anderson). Although parents and educators may be uncomfortable with struggle, students must learn to rise to the challenge at some point – and with support, they are completely capable of such endeavors. If the first time a student faces a struggle like this is in college – or worse, their career – they will not have access to the scaffolding available in primary education, and will not achieve what they otherwise could have.

In the classroom, struggle is not pointless; it is a necessary part of developing skills like communication and grit that will assist students throughout their lives. As such, teachers must learn to let students fail, using strategies like collaboration to maximize the learning that occurs both in testable concepts and in mentalities. In this way, struggle can be the foundation of success.

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