What's edtech got to do with growth mindset?

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I remember it as if it was yesterday. It was the first week of fifth grade and I was so ready to learn History. I had spent the previous summer poring over an Ancient Egypt book so it had to become my favorite subject. At one point, the teacher turned to us and said: "pay attention to this because I won't explain it twice".

Then came the overwhelming sensation that I was not going to be able to pay attention. As a consequence, the whole day was spent contemplating how will I ever get that knowledge and whether I was going to fall behind. Smart kids knew how to pay attention so I just had to be one of them.

Sounds familiar? Or does it sound like my 11-year-old self was already absorbed by the idea that my intelligence was a fixed trait that I couldn't change? Sure, many years later (and a Psychology degree in tow) I can say that I know exactly what led to my catastrophizing of a not so terrible situation.

I had a fixed mindset.

By now, the theory of Carol Dweck – growth vs. fixed mindset – has captured the interest of researchers and teachers around the world. In her <u>seminal book</u>, she proposes this simple, but important idea: *a growth mindset is about believing people can develop their abilities*, having a few key components:

In having a growth mindset people can:

- Accurately identify strengths and weaknesses
- Love a challenge and see it as an opportunity to grow
- Turn setbacks into future success
- See effort as a good thing
- Make learning a priority

This has also led to many teachers being inspired to search within themselves and identify their own mindset in order to pass it on to students. However, even teachers with a growth mindset cannot help students reach their full potential without showing their mindset through actions.

Simply telling students "You can do anything!", which Dweck associates with a false growth mindset, won't help them achieve their learning goals, at least not in the long run.

Educators need to be consistent with the messages they send and incorporate a growth mindset in what they do, including technology — or **especially in the way they use technology to teach**. It's no longer what happens in the learning environment, but what happens when edtech comes into the mix and how we can enrich that environment.

Here are a few ideas on using edtech to promote growth mindset:

Showing progress through competency-based learning

Using a neurocognitive approach, researchers found out that children with a growth mindset are better able to <u>bounce back from failure</u>. They also pay more attention to their mistakes and use constructive feedback to improve their subsequent performance. Unsurprisingly, a central tenet of growth mindset is a focus on achievement, which increases motivation and confidence in students.

Unfortunately, that is difficult and time-consuming to do during class. This is where a learning management system comes in handy with a simple solution to track student achievement: a <u>competency-based learning feature</u>.

Among other things, the feature lets you know where students are at any given point in their learning process so you can help them adjust their learning strategy if needed. Students can learn at their own pace if they have access to the learning materials beforehand since ownership is a big part of the process.

And yes, although it may seem that some students might not get on board right away, it is a low-risk approach so even the more risk-averse students can gain confidence by seeing their progress and start enjoying the process in itself.

Read more: The PROs and CONs of competency-based learning

Give growth-oriented feedback

External feedback can influence how <u>students feel about themselves</u> and influence the way they learn. As they pay close attention to these messages, feedback is one of the best instruments that teachers have to improve learning outcomes. However, not all feedback is made the same. Negative or positive comments without guidance for improvement can be counterproductive. Instead, growth-oriented feedback has shown great promise.

Through a growth-oriented approach, teachers are guiding students by appreciating their efforts and by pointing out the areas in which they can improve. This type of feedback focuses on progress and reflection instead of the right or correct answer.

Here are some examples of growth-oriented feedback:

- Comments about their learning progress and what they are doing: "You used the right method to solve for X" instead of "You're smart!"
- Praise for effort, but not for effort only if the results aren't good: "It shows that you tried hard, but next time I want you to read more carefully" instead of "You tried hard!"
- Suggestions for finding the right strategy for learning: "You should have a look at two alternative explanations before writing an assignment" or "Let's try using <u>practice quizzes</u> instead of memorizing"

In addition to face to face discussions, it's also useful to find alternative ways of giving feedback to students. For this purpose, you can use simple online forms or an LMS, which enables you to leave comments related to an assignment and even record your comments which saves a lot of time. In this way, students can revisit your suggestions anytime they want and use them to improve their learning.

Challenge students to learn more

I think it's clear by now that when we tap into our growth mindset, we love challenges: the more difficult the task, the better. This applies to all areas of learning, including STEAM, where the prevalent mindset is that some abilities such as Math abilities are fixed. This <u>cannot be further from the truth</u>, but the fixed mindset could be a reason why many students give up on this particular learning path.

Teachers can create more challenging activities during classes, but also online. To offer equal opportunity for students to develop, you can add more resources such as videos and even extra practice quizzes or problems that they can solve on their own. Challenges can also come in the form of extra assignments or learning paths, which take the students on a set of learning goals that they have to complete.

Read more: The role of the LMS in designing personalized learning paths for students

Keep in mind that they should not be counted towards a grade. Let the effort be for effort's sake. In this way, it lowers the chances that they'll develop a need for validation. This is also an opportunity for them to take risks, while still having a safety net in place. Instead of making things easy for them, the technology allows you to offer increasingly harder tasks and also make it fun with features such as gamification.

Visualizing progress through gamification

Competency-based learning is not the only way to see progress. Completing units can also give them that satisfaction and it's even better when using <u>gamification</u>. That is, gamification works especially well when the <u>incentive structure</u> promotes a growth mindset. The idea is that they should visualize the process and take pride in their own accomplishments, knowing that this is just as important as the learning outcome.

For example, you can choose to give them a badge for "Good progress" or center a whole game around a "Knowledge Mountain" that they have to conquer. Each time they earn a point, they are growing their "brain muscle". In fact, to further emphasize the idea of progress, they don't have to earn badges for receiving a certain grade or even gain points when they pass graded assignments.

The game progress can be seen by the student and sometimes they can play in teams where everyone gets to contribute and earn points.

Encouraging students to collaborate

So you might be wondering: how does collaboration factor in all of this? The answer is that given the tools they need to thrive, students with a growth mindset do great in a <u>collaborative learning environment</u>. In fact, you won't be surprised to find out that children internalize the messages that they hear and certainly don't keep them to themselves.

Take for instance a child that is struggling with homework. They can ask their peers for help and receive different kinds of messages. Students with a growth mindset will repeat what they themselves believe such as "You can do this. I've seen you come up with a good answer before it just takes some time to think about it."

As a consequence, the positive influence on their peers cannot be discounted. One way to ease the way towards a better collaboration is to offer them tools such as chat and groups, or online group assignments. Older students can also mentor younger ones. By setting up mentor accounts in an LMS, they can be there to answer questions, help with homework, or simply have a chat when a struggling student needs it.

Using formative assessments more frequently

Setting high standards without guidance on how to achieve them is a setup for failure. To do this effectively, teachers should be able to identify learning gaps and work towards closing them. As we have seen, feedback is a great way to offer guidance to students.

Another solution is the frequent use of formative assessments, which in contrast to high stakes tests and exams, give students the chance to practice what they've learned with less pressure. You can <u>find inspiration here</u> with strategies created by Jo Boaler and David Wees, but you can also transform the way you use formative assessments with the help of technology. Here are some suggestions:

• Use an online survey form or your LMS survey assignments

- Ask students to self evaluate online after each lesson or module in writing or by sending a recorded message
- Online discussions guided by the teacher
- Self-reflection: students can keep an online learning blog that only they and the teacher can see
- Assessing students in a variety of ways so they can develop their strengths. A good example is submitting a video assignment instead of an essay

Read more: 3 Teachers that are crushing assessments with ed-tech

Technology loves the growth mindset

As education and technology become more intertwined, we must think of the impact of edtech and how we can use it to actually support pedagogies that promote growth mindset. There are many tools at your disposal, including <u>your school's LMS</u> so teachers don't need to look elsewhere for technology. It's what you do with it that counts!

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Ioana believes that education in action is the only way to change the world. When she is not writing about learning and ed tech, she can usually be seen reading a book and drinking lots of coffee.

