Inside This Issue

eSCHOOL NEWS

Technology News & Innovation in K-12 Education

Vol. 21, No. 2 | eSchoolNews.com | April–June 2018

How to design a school of the future

BY JEFF MCCOY

Several years ago, Greenville County Schools in South Carolina took an innovative approach to designing a new middle school to be named for our former superintendent, Dr. Phinnize Fisher. We threw out traditional building specs and came up with a new process to design the school around a focused curriculum: STEAM and project-based learning (PBL).

Like most districts, our building specs drove our school design. They were effective in providing standardization but not innovation. Under the direction of Deputy Superintendent (now Superintendent) Dr. Burke Royster, we developed a new way to design schools that has become the model for how we design schools. In 2015, for the first time in more than 20 years, Dr.

Design, page 2

8 ways to help students grow their grit

BY LAURA ASCIONE
Managing Editor, Content Services

For a relatively new buzzword, grit certainly has a lot of supporters. It is grit, and not necessarily IQ or talent, that can predict students' academic success. And as educators seek to understand students from a motivational and psychological point of view, grit pays an important role.

"Grit is passion, perseverance for very long-term goals, stamina," says Angela Duckworth in her now-famous 2013 TED Talk.

In that talk, viewed more than 13.5 million times, she describes her study of different predictors of success and how grit

Grit, page 16

3 ways our school uses data to drive instruction

BY CHERYL BEAUCHAMP AND MELINDA CHEMIN

For the last six years, data has been part of our "secret sauce" here at Bronson Elementary School in Bronson, Fla. Many of our students come from economically disadvantaged homes so we know we need to continually work harder than most schools to help our students succeed academically—and data helps us do this.

Our teachers and administrators are constantly looking at data trends—including data over periods of time, across grade levels, and for individual teachers and subgroups of students—to help drive instruction and student achievement. Specifically, Bronson uses

Data, page 3

Design

continued from page 1

Phinnize Fisher Middle, a K-12 facility from the southeastern U.S. was named the national James D. MacConnell Award winner by the Council of Education Facility Planners International.

Here are some of the lessons we learned while designing the Dr. Phinnize Fisher Middle School.

1. Re-think the purpose of schools

We have schools so that students can learn. Up until recently, the school building was seen as just that—a building that houses students so they can learn. We were missing out on an amazing opportunity to use the building for learning, not just a place to learn. Fisher Middle has exposed ceilings with colorful pipes, server rooms that are behind glass, and walls and walls of windows letting in maximum sunlight and reducing energy costs. The building is literally a teaching tool.

2. Involve all stakeholders

In most cases, when a school is commissioned, the ed specs are pulled out, architects called in, and project managers start their work. With Fisher Middle, multiple stakeholders were involved well before we started to design the building. We asked for design input from local community partners, business partners, and multiple district departments. Typically, the academics division is not involved until the school is completed. For this project, academics was involved from the start.

3. Eliminate the silos

Our executive director of facilities, Terry Mills, led the process and made it clear from the beginning that academics should provide the direction on the design so that the school could be designed around the curriculum. He and his team supported us as we provided insight on how the school could best be built to support the curriculum. He made sure all departments worked together. The end result? A school that truly was built with curriculum in mind.

4. Know your purpose

We knew that Fisher Middle would be a STEAM school with a PBL curriculum. All students in our district have the same curriculum but the delivery model and focus varies from school to school. For this PBL school, we designed wide open spaces and classroom walls made of glass to make collaboration a breeze. Small workrooms, also made of glass, include a TV and table so that students can work on projects while teachers watch from a distance. A rain-collection system in the cafeteria allows students to see rainwater being collected and reused for other purposes. These are just some of the innovative spaces that required outside-the-box thinking.

5. Don't be afraid to take risks

When you are designing a multi-million-dollar building, it is daunting to take risks. We took many risks in the design, and I'm happy to say that most, if not all, paid off. For example, we did not assign teachers a classroom. Instead, there is a collaboration room for teachers in each of the nine learning communities. These collaborative spaces house teacher's cubicles, materials, books, and personal belongings. Each classroom in the learning community is designed differently so that teachers can change rooms based on the activities they will be doing.

Initially, we weren't sure how teachers would feel about not having a traditional classroom that belonged to them. However, if you talk to the teachers today, most will tell you that they collaborate at a much higher level than ever before because they are together all the time. That collaboration can certainly be seen as you walk around Fisher.

Our new model for designing schools has one big drawback: the amount of time it takes to design each school. Although it is time intensive, watching how perfectly the school fits the focus of learning makes it worth the time invested.

I remember walking into Fisher Middle the first day students entered the doors. The look on their faces and the excitement at seeing the new building made it worth all the hours spent in design meetings. They didn't know how the building was going to impact their learning—they only saw the cool exposed ceilings and the blinking lights of the servers behind glass. The building sparked a curiosity among students that led to questions about the building. And our incredibly talented teachers turn those inquiries into learning experiences every day! As educational leaders, how better could we give of our time than designing something that will truly serve the educational needs for decades to come? eSN

We asked for design input from local community partners, business partners, and multiple district departments. Typically, the academics division is not involved until the school is completed. For this project, academics was involved from the start.

Jeff McCoy currently serves as the associate superintendent of academics for Greenville County Schools in South Carolina. He oversees the offices of academic support, academic innovation and technology, accountability and quality assurance, career and technical education, and early childhood education. He presents frequently around the country on the topics of personalized learning and innovation in education.

Data

continued from page 1

schoolwide data to determine core instructional needs and proficiency targets. We use grade-level data for insight into groups for intervention, classroom data to support differentiation in the classroom and teacher effectiveness goals, and student data to identify intervention needs and IEP goals.

The data we analyze is collected from various sources, including the Florida Standards Assessment (FSA) in reading and math for grades 3-5 and the Florida Comprehensive Assessment Test Science for grade 5. We also use diagnostic data that we collect three times a year using the i-Ready program for reading and math in grades K-5.

Below are three effective strategies for using this data to support all of our students.

Talk with each student about his or her goals.

Setting goals is important for everyone, including students—the more students are involved in the process, the more motivated they are to succeed. Our teachers have data chats with students prior to their diagnostics to discuss where they want to score. This sets expectations and helps students take ownership of their own learning.

As principal, I also go into classrooms and talk to students one-on-one and go over their data and their concrete goals for improvement. This helps to further keep students accountable and reinforces to them that improvement is a team effort.

Make the data visual for everyone to use.

To have an overall view of our school's data, we created a data room (see photo) that displays all of our students' data. This lets us determine which students need additional support, where they are falling behind, and what intervention services they need.

Based on this, we assign our students to small, grade-level group instruction with a teacher who is strong in the given skill they need help with. This daily intervention time is built into the school day with 30 to 45 minutes reserved for the groups to work on specific skills. We have three days of reading and two days of math, unless otherwise specified by student needs.

Setting goals is important for everyone, including students—the more students are involved in the process, the more motivated they are to succeed.

We also provide intervention support for smaller group sizes, as well as ELL and ESE students. In the classroom, teachers are also doing their own instructional groupings and providing intervention to students as needed.

Identify year-to-year trends.

We use our end-of-year diagnostic data to see if we need to make schoolwide adjustments to our core instruction. We identify patterns and trends—both by cohorts and individual students—and make changes to our instructional plans to ensure student growth.

The year-to-year data also helps ensure teacher buy-in, especially with our novice teachers, to our school's data culture, which also indirectly helps our students. There is often a big learning curve for our new teachers, but when they look at the data and see how the programs we have in place are helping students succeed, they trust in the process.

As a result of our data-driven approach, our students are thriving. Our school has improved from a "C" school in the 2014-15 school year to a "B" school in 2015-16 and 2016-17 school years and we have been the highest performing elementary school in our district for five years in a row. Additionally, our students' proficiency on the FSA has jumped double digits in reading and nearly double digits in math—a positive trajectory that we will work hard to continue! eSN

Cheryl Beauchamp is the principal of Bronson Elementary School in Levy County, Florida. Melinda Chemin is the reading coach at Bronson Elementary.

5 biggest data center mistakes (and how to fix them)

BY JOHN JENNINGS

Behold, the school district data center.

To the untrained eye, it's just a room full of servers, racks, cables, power supplies, storage devices, and whatever other components happen to be lying around.

But it's so much more than that. It's the backbone of your entire technology infrastructure. If even the smallest thing goes wrong, you could very well lose access to the network and systems you rely on to keep your district functioning.

Given the data center's importance, one might expect a great deal of care to be put into its construction and upkeep. Unfortunately, that's not always the case in school districts. Here are five common mistakes to avoid when planning your next data center.

1) Stick it in the basement

When budgets get tight, physical workspaces are at a premium. One district IT team we spoke with had its entire floor in an administrative building given over to another department. When asked to move the data center ("What? You can't just unhook everything, move it to a new location, and put it back together?"), the tech staff was stunned to learn that its "new location" was the basement of a warehouse where snow clearing equipment was stored.

Why is this bad?

Strict temperature control and minimal exposure to the elements are the most basic elements of data-center best practices. Basements make for poor locations due to the added risks of water damage from flooding and plumbing issues. Basements in storage warehouses are doubly bad, given the increase in grit, grime, and temperature fluctuation.

2) Exceed load-bearing capacity

If not the basement, then where? Most school districts can't afford to own or lease a building exclusively for a data center, so it becomes a question of how a dedicated space for all that hardware can be integrated into an active office building. If the best place for it happens to be anywhere but the first floor, the sheer weight of so much equipment has to be taken into consideration. At least one district we know about has hesitated to add anything new to its second-floor data center for fear of having the floor literally drop out from under it.

Why is this bad?

Imagine how it would feel to work directly below an overweight data center. No thanks.

3) Underestimate your students' capacity for mischief

Digital literacy is great, as long as it doesn't fall into the wrong hands. Technology leaders have seen firsthand the malicious side of "technology natives" in student populations. A school district's biggest threat isn't some highly trained hacker in Eastern Europe, it's the bored high school junior looking to show off his dark web connections.

Why is this bad?

Distributed denial-of-service (DDoS) attacks that once required years of experience and deep coding knowledge can now be initiated by anyone with a little research prowess and a couple bucks to spare. One of the most fun ways to combat the threat of DDoS is the use of multiple internet service providers. Now, when a district identifies the early stages of a DDoS attack, technology staff can simply flip a switch and move all services over to the unaffected connection.

This kind of planning prevents downtime and leaves confused students wondering why they aren't seeing any results from the time and money they've invested in their little side projects.

4) Skimp on power

Power outages are inevitable, but downtime simply can't happen. Insufficient investment in or attention to backup power-solutions options can result in devastating loss of data and/or accessibility. One district chief technology officer we spoke to stressed the importance of performing regular checks on uninterruptible power supply (UPS) systems. Never assume that the fail-safes you've always had in place will be ready when you need them.

Why is this bad?

A data center without power is just an expensive storage closet. It can be tempting to settle for minimal investment or rely on the building's generator, but most experts recommend a dedicated generator to supplement the UPS system and manage the data center's cooling needs (which can rapidly deplete batteries).

5) Neglect the backup plan

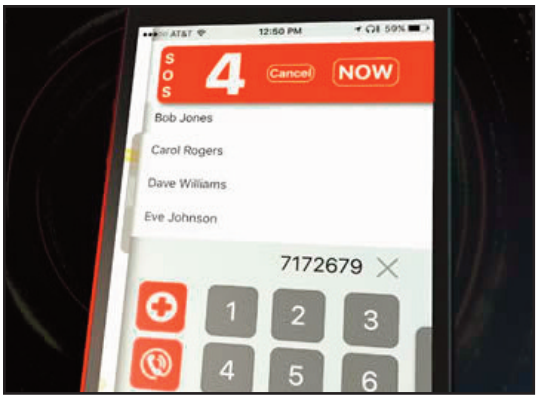
In the words of one district technology leader, "You will be hit by ransomware at some point."

It's one thing to have a backup and recovery plan in a drawer somewhere. It's another to have some who is accountable for the process, reviews it on a regular basis, and makes sure it aligns with your district's specific needs. What number represents "acceptable" data loss for your organization? A day? Six hours? One hour? Worst-case scenario, how long can you afford to be without access to your most critical systems? Are backups running correctly and at the appropriate intervals? Someone in your districts needs to be able to answer these questions.

Mistakes, page 5

Districts turn to tech to prevent school violence

Technology plays an important role in mitigating threats that could turn into security incidents



BY LAURA ASCIONE
Managing Editor, Content Services

School violence regularly occupies news headlines, turning students into activists as they demand gun control and call on lawmakers and education stakeholders to drastically improve school safety.

This disturbing trend, including the Feb. 14 shooting at Marjory Stoneman Douglas High School in Parkland, Fla., and the March 20 shooting at Great Mills High School in Great Mills, Md., has prompted many districts to turn to technology solutions to put an extra layer of safety measures in schools.

Tools that monitor social media for threats, anonymous reporting systems, and databases to track and identify potentially preventable patterns among shootings are growing in popularity as educators recognize the importance of technology in preventing school violence.

"We have so much advancement in technologies, and we protect a lot of our prized assets, but we don't do much to protect our students," says Rob Bridges, president at Cathedral High School in Indianapolis. "We're still kind of protecting them the old-fashioned way. After the Parkland shooting, I said there has to be more we can do than just lock ourselves in our classrooms and hope for the best."

That's when Bridges began communicating with DMI, a mobility solutions provider launching EndZone for Education, a mobile app and platform for real-time response management in the event of a security incident.

"The primary attraction for us is the communication capability, including a pop-up SOS button, video capabilities, and staff communication tools to get word to first responders in seconds rather than minutes," Bridges says. "We hope we never have to use it, but we want to have the best technology available to protect our students."

Spotting patterns to help prevent violence

Researchers at John Jay College of Criminal Justice in New York have created a national open-source database tracking K-12 school shootings. The goal is to provide a platform to help gather and analyze data surrounding risk factors of school shootings, explains Professor Joshua Freilich, the project's principal investigator and a member of the Department of Criminal Justice at John Jay College.

"The dearth of empirical data on school violence in the United States and the almost complete absence of quantitative data on perpetrators and incidents will be remedied by the production of this database and the analysis of data on the risk factors of school shootings," Freilich says.

Researchers hope the database will help stakeholders document the nature and types of school shooting incidents in schools, and identify intervention points that could be used to reduce the harm school shootings cause.

Making it safe to report threats

Lightspeed Systems announced a new component to its Relay student safety and filtering solution. The new element, called Threat Check, is designed to give schools a place to track information that helps identify high-risk behaviors and prevent incidents such as school violence, self-harm, and bullying.

Threat Check draws from models of students' typical online behavior and

Prevent, page 7

Mistakes

continued from page 4

Why is this bad?

On the off chance that you are able to avoid the increasingly sophisticated threat of ransomware, chances are you'll still experience the threat of data loss as a result of equipment failure, human error, or even environmental factors. When you consider the sheer volume of activity occurring in just a handful of your most-used systems (student information systems, learning management systems, ERP systems, etc.), the need for a reliable backup and recovery plan becomes apparent.

Champion good choices

It's not easy to convey the importance of a well-built, well-maintained data center to a nontechnical crowd, but any of these five mistakes can lead to significant ramifications for the experience of your staff, students, and community.

If you need visuals to make your case, we've got you covered. Enjoy. eSN

John Jennings is the digital media manager at Skyward and managing editor for the Advancing K12 blog. He is a champion of culture and sworn enemy of red tape. You can follow John on Twitter at @LeadWithCulture.

8 informal assessments to pinpoint what your students need

Here are 8 great ways to gauge students' understanding during the learning process instead of after

BY CHRIS BALOW

The great thing about informal assessments is they help us gauge students' understanding during the learning process instead of after. Informal assessment also changes teachers' relationship to student learning.

Through informal assessment, a teacher becomes a guide throughout the learning process, rather than the judge of the student's final product. While committing to formative—or informal—assessment school-wide can be a game-changer for your learners, it's also important to understand that regularly checking in with student learning can dramatically improve outcomes.

Teachers are already stretched when it comes to classroom management and covering all the required content. To make it easier for them, look for informal assessment practices that fit into the life of the classroom and result in data that's easy for teachers to track and follow through on.

Here are eight everyday informal assessment practices to get you started.

1. Exit slips

Get kids in the habit of knowing they will be expected to fill out exit slips that follow the same format every time. This helps students know what they need to be thinking about as they are learning. Here are sample questions you can ask:

- 3 things I learned today
- things I found interesting
- question I still have

2. Kahoot!

Kahoot! is a platform where teachers create quizzes, discussions, and surveys. Kahoot! is displayed via a TV or projector, and students enter the game pin to play from their mobile phone or other device. One of the best features is that it collates data for teachers in a downloadable spreadsheet, where they can see if students are struggling with anything in particular.

3. Backchannel chat

A backchannel is a digital conversation that happens at the same time as a face-to-face activity, where students can share their thinking about the topic or assignment. This app gives students and teachers a place to store back-channel conversation information that can be used to see how students feel about their learning. This kind of formative assessment gives teachers insight into which students might be thinking, "I'm not sure I understand this" or "What does this have to do with what we are learning?"

4. Plickers

With Plickers' easy-to-print code sheets, teachers can collect data with only one device. Here's how it works: Each student is given a card with a unique code. The code has four sides, each lettered A, B, C, and D. Students hold their cards so that the letter they choose to answer the question with is at the top of their card. Teachers can then use the iOS or Android app on their smartphone to slowly scan the room.

The app recognizes the cards, records who's been assigned, and captures the answer that the student chose. The app will only record each student's answer once, so there's no need to worry about a second scan skewing the data. Collecting formative data in this manner is fast and engaging.

5. Skills checklist

Before teaching a unit, teachers can develop a list of all the skills each student will learn. When working with students, teachers put a "+" or "–" to indicate where they think each student is on each skill. The data goes into a spreadsheet or into a learning management system. Using tools to save, store, and manage the formative data you and your teachers need can make the difference between formative assessment buy-in or not.

6. Demonstration stations

Demonstration stations are a great way for students to show what they know and to help the teacher determine the direction of future instruction. Stations are set up at varying points during a unit. At each station, there should be an iPad or laptop where students can enter their thinking and results, making data collection seamless. For example, you could have a table with Wikki Stix. Students use the Wikki Stix to make the sight words on their list on a mat with their name on it. Using an iPad, they take a picture of the words and… there's your evidence!

7. Photo capture

Take photos of things related to the current learning. Ask students to caption each photo based on their understanding of the subject (via a social media app like Instagram). Assess the captions and give them a rating based on a scale from 1 (deep understanding) to 5 (surface understanding).

Pinpoint, page 7

Prevent

continued from page 5

uses online analysis and data points to convey information to school administrators. Educators say it gives them another tool to track and address threats.

"Technology has become a tool to work with and can help us monitor situations closely and provide additional alerts," says Jordan Beveridge, administrator for technology services for Oregon's Beaverton School District.

Beaverton uses Relay to filter and monitor student activity. Tools like filtering and monitoring solutions offer an important window into student's current state of mind and whether a student could be a threat to themselves or others, Beveridge adds.

"We already use Relay to filter, monitor, and protect our students," says Gary Brantley, chief information officer of DeKalb County School District in DeKalb County, Ga. "[Relay] will give us even more insight and tools to do that."

DeKalb County is not alone. Schools have indicated their need for increased safety measures, according to Brian Thomas, chief executive officer of Lightspeed. As Lightspeed helped districts become CIPA-compliant, "we started tracking things like suspicious search-engine queries and other activity on the internet that might cause alarm for a school district."

With the increase in mobile devices, Thomas says Lightspeed decided to add an offline-monitoring component to take monitoring a step further and help districts build a story around if a student is trending toward a higher risk for very specific behavior.

The software can highlight students who look to be at risk, but school personnel also can choose to watch a student's data based on offline observations. School personnel can use Threat Check to flag high-risk students and input offline activity, including violence or threatening speech, into the system.

"Are there data points that help us believe he or she could harm themselves or others?" asks Thomas. "We're not saying the software alone is the answer. We believe with these data points and alerts, we can give districts an opportunity to investigate further."

Efforts also focus around reporting mechanisms that help educators, students, and community members track and report potential threats or alarming incidents.

The Say Something Anonymous Reporting System, launched by Sandy Hook Promise, lets students submit secure and anonymous safety concerns to identify at-risk individuals before they hurt themselves or others. Students can submit via a mobile app, a website, or a 24/7 crisis center.

"We know from research, data, studies, and history that people talk about violent acts first," says Mark Barden, Sandy Hook Promise's co-founder and managing director. Barden lost his son Daniel in the Sandy Hook Elementary School shooting. "We see the proof points of that following these mass tragedies just about every time. With our anonymous reporting system, people are trained on what to look for and to identify those warning signs. The reporting system is a safe place for them to record that information."

Calls are routed to a call center staffed with trained professionals and experts who triage the information into two different categories: immediate life safety, which connects with law enforcement, and the other category that addresses important concerns that are not immediately life-threatening.

The free reporting system joins Sandy Hook Promise's other programs, including a suicide prevention program, safety assessment and intervention, an outreach guide to encourage community connections, and a "Know the Signs" program.

"We know this is preventable. We have four programs and all of them are evidence-based or evidence-informed and effective at preventing a tragedy, whether it's a self-harm or an act of mass violence. I absolutely feel this would go toward building a more secure feeling in a community," says Barden. eSN

*[**Editor's note:** Part 2 of this story will examine social media monitoring tools, whether they infringe upon student privacy, and civil rights groups' claims that racial and ethnic minority students experience increased scrutiny when schools implement such tools.]*

Pinpoint

continued from page 6

8. Student-created quizzes

Instead of giving students a quiz, have them create their own! Formulating questions about newly learned content is a good way to encourage deep thinking. For example, as you're reading a class novel together, assign different groups of students to work together to create a quiz on one of the chapters. There are apps that let teachers scan all the quizzes into a computer or device for instant data access.

Teachers have been using formative and summative data to inform their teaching for a long time. Interpreting data helps teachers understand how students learn and how best to meet their needs. At the same time, when students learn how to track their own data, it can empower them to understand their learning. Best of all, informal assessment moves your school culture away from judging and testing toward a more student-centered focus on the learning process. eSN

Chris Balow, Ph.D., is the chief research scientist at Illuminate Education, which provides data, assessment, and student information solutions for K-12 schools and districts.

5 things every K-12 employee should do to protect student data

Here are five easy steps everyone can take to safeguard student data

BY MIKE OSWALT

Student data privacy and security are top priorities for edtech leaders. When asked to rate the importance of these topics, 68 percent of respondents said they were more critical than the prior year, according to an annual survey of K-12 chief technology officers from the Consortium for School Networking.

While IT leaders in education have their hands full trying to protect the student information stored and accessed in the software and data systems used by their schools, the actions of other employees throughout the district can support—or undermine—these efforts.

Here are five practical steps that every school or district employee should take to keep student data from being compromised.

1. Check with your IT department before using apps or software.

If you want to use an application that collects any student data, make sure it has been approved by your school or district technology team. If they haven't already, they will want to review the application's data privacy policies before approving the app for use. If these data privacy policies don't pass muster, your IT team might be able to suggest another application you can use to accomplish the same purpose.

2. Don't keep or share student data any more than you have to.

You should only hold on to student data for as long as it takes to complete the task at hand; once you no longer need this information, you should delete it. (And make sure you empty your trash and delete the contents of your "Downloads" folder regularly, too.) Also, don't leave any student information lying around where someone might have access to it, and don't discuss student records with others unless they have a legitimate educational interest—meaning it's information they need to do their job.

3. Don't share personally identifiable information about students in email.

Email isn't a secure method of transmitting sensitive information because you have no control over where the message might end up or who can access it. If you have to send personally identifiable information about a student to someone, use a secure file transfer site instead.

You should only hold on to student data for as long as it takes to complete the task at hand; once you no longer need this information, you should delete it.

4. Don't use actual student data for training purposes.

During training workshops, you might have to use student data, such as when you're demonstrating how a certain program functions. In these cases, don't use actual student data unless you have the permission of your district. And even then, you should only use real data if it's essential to the training goal in question. Otherwise, use "dummy" data. When creating handouts or presentations, black out or blur any live data.

5. Keep your devices secure.

Make sure all laptops, smartphones, or tablets that you use to access student data are password-protected, and keep them locked or turned off when they're not in use. When you're done using an application that contains student information, always log out. Never keep passwords written down where somebody might see them. And consider using tracking technology, such as iCloud's "Find My Mac" application, to locate and possibly retrieve any device that is lost or stolen.

For more information about safeguarding student data, here are some additional resources:

Educator's Guide to Student Data Privacy: Published by FERPA SHERPA, this guide is intended to help teachers use technology in the classroom while protecting student data.

Protecting Student Privacy: This student data privacy resource was created by the U.S. Department of Education.

Parent's Guide to Student Data Privacy: Also put out by FERPA SHERPA, this guide helps parents understand various laws around student data privacy. eSN

*[**Disclaimer:** The information in this article is intended for general information purposes only and is based on the cited resources and field experience. The information presented is not legal advice, is not intended as such, and is subject to change without notice. Please consult with an attorney before making any determinations regarding compliance with local, state, and federal law.]*

A former teacher and school administrator, Mike Oswalt now helps educators use data to improve student success for Illuminate Education.

Pay attention! 5 ways to improve your students' attention spans

45 percent of a student's day is spent listening; shouldn't we do everything we can to improve their skills?

BY CORY ARMES

Paying attention sounds easy. But is it really? How many times have we reprimanded students for not paying attention?

Attention is the ability to focus on information and tasks while ignoring distractions. We know that fluent reading requires sustained and focused attention, yet attention spans are declining. A 2015 study by Microsoft reported that, since the year 2000, the average attention span dropped from 12 seconds to eight seconds. Researchers theorize that a weaker attention span may be a side effect of the mobile revolution and an increasingly digitized lifestyle. Many of these distractions begin long before adulthood. Consider these statistics about smartphones:

- The average age for a child to get a smartphone is 12.
- More than half of children under the age of 12 have a smartphone.
- 21 percent of children under the age of eight use smartphones.

How does this impact students as they come to school? How do they feel when they have to turn off their phones and other electronic devices and pay attention for 40, 50, or 60 minutes at a time?

It's virtually impossible to imagine a classroom where paying attention to the teacher for sustained periods of time is not critical to academic success. According to the International Listening Association, 45 percent of a student's day is spent listening, and students are expected to acquire 85 percent of their knowledge through listening.

Fortunately, attentional skills are amenable to training. Here are a few different ways to increase your students' attention spans in the classroom.

1. Practice mindfulness.

Ask students to be aware of their breathing. Sounds simple, right? But how many of us actually take the time to notice our breathing and how we feel in each moment? Helping students get grounded in their bodies can help with paying attention. Using an expanding sphere ring to help students pace their breathing is a great way to calm everyone after a strenuous activity or at the beginning of a class period.

2. Power-up the brain.

Make sure students are alert and ready to take in information. If students don't seem ready to pay attention, try a series of quick physical activities to help the body "wake up" so the brain better is able to focus. Even a quick game of Simon Says can help build focus and attention without creating chaos.

3. Break tasks into smaller chunks.

Some children can't pay attention to multi-step directions and may need tasks broken down into individual steps. For example, instead of providing a set of several instructions at once. Instead of "Pull out your workbook, turn to page 8, and read the passage. Then answer the questions on this worksheet and turn it in to me for grading," pause after each individual step and give students time to complete that step. This helps build students' confidence while lowering their frustration.

4. Build underlying cognitive skills.

Attention is a major cognitive skill necessary to become a successful learner. Many children who have trouble with focus and attention don't process information efficiently, which is an impediment to accurate listening and reading. Neuroscience-based interventions such as the Fast ForWord program target cognitive skills such as memory, attention, and processing speed, as well as language and reading skills. By working from the bottom up, using the principles of neuroplasticity, this type of intervention can remediate the underlying difficulties that keep children from paying attention and making progress.

5. Make time for recess.

Give more recess time to students, especially younger ones. Several schools have found that increasing the amount of time for recess and unstructured play results in an increase in students' focus, decreases in distractions and behavioral interruptions, and improvements in test scores. While it might seem counterproductive to add more play time to the school day given everything that students are expected to learn, students who get more recess time have been shown to have an easier time focusing in the classroom.

Learning of any kind requires good attention skills. When students can attend carefully to a task and stick with it, they understand more. They ignore distractions. They don't become frustrated or lose interest. They don't disrupt others' learning. When students pay attention, teachers can focus on teaching and students can focus on learning. That's a win-win in anyone's book! eSN

Cory Armes is a national education consultant with Scientific Learning Corp. She has 18 years of experience in K-12 education as a general and special education teacher and educational diagnostician, specializing in working with students with learning disabilities and behavioral issues.

The New Librarian: Using advocacy to promote leadership

Here are a few steps you can take to empower your librarians

BY MARGARET COLE

*[**Editor's note:** Welcome to our new series, The New Librarian. In this series, we will be profiling innovative and award-winning library media specialists who will share their favorite tools, lessons, and advice. If you are or know a librarian we should write about, send a note to eullman@eschoolmedia.com.]*

As innovation coordinator for instructional technology, information & library media at Parkway School District in St. Louis, Missouri, Bill Bass has long demonstrated his commitment to 21st-century learning. He believes that the only way to deliver a dynamic student learning experience is by empowering his librarians to be leaders in everything they do.

Bass has earned numerous awards, including being named an NSBA "20 to Watch" and an ISTE Making IT Happen award. He was recently elected ISTE president for 2019.

Bass says one of the biggest things he offers his librarians is that of a constant voice advocating for them as leaders when it comes to literacy, instruction, and technology. He urges administrators to think differently about the way libraries are used and the role of the librarian in the digital age.

Here are some ways he advocates for his librarians.

Listen to empower.

"As a district administrator, my role is to set priorities and vision for our program while helping to navigate new challenges," he says. "Since this means different things in different buildings, I must constantly listen to and intentionally garner feedback from each piece of the greater community to be effective."

To him, listening means creating multiple opportunities for professional learning for librarians so they can stay in front of trends and be able to provide answers when students, teachers, and parents come to them for help and support.

From the moment Bass stepped into his current role, he started asking his librarians, "What does it mean to be a librarian in the digital age?" While it may not be a question with a single answer, Bass believes every librarian should readily have his or her own answer.

Get involved in the movement.

Bass says getting involved in advocacy efforts like Project Connect (spearheaded by Follett School Solutions) is one way for administrators and librarians to promote innovative learning opportunities for students. He also recommends staying informed, sharing with others advocacy pieces like the popular TEDx talk by Mark Ray, "Changing the Conversation About Librarians," and urging colleagues to take the Future Ready Pledge.

Take it beyond your library or district.

A key characteristic of modern leaders in library spaces is the desire and commitment to connect beyond any individual library. "There is a tendency to be very inward looking and think about the current state of your own programs, but by intentionally looking beyond our own districts, and beyond the profession of librarian, we can find many amazing ways to approach our work and continue to better serve our communities," says Bass.

He's learned that to be a better leader he must take the same level of risks that he's asking of his librarians. "I have to lead by example and be willing to try things that may not work."

Offer innovative professional development (PD).

To help his librarians remain relevant, Bass set up structures to bring them into the conversation with curriculum, technology, PD, and instructional leaders. He recommends librarians be given access to training that promotes innovative models of school libraries, like the microcredential courses offered through Project Connect.

Bass said Parkway's librarians are tightly aligned with the district's plans for technology and are positioned as leaders and the "go-to" people in their buildings. "We gave them higher levels of access to online tools to help buildings solve instructional challenges and we listened to them because they are our biggest conduit into building needs and cultures. We purposely connected the library program to other initiatives."

Advice for other districts

As Parkway continues to move forward, Bass realizes there are many districts, schools, and librarians that strug-

Leadership, page 11

Can today's new technologies totally revamp learning?

Technologies such as AR, VR, and wearables might be able to support more responsive learning environments

BY LAURA ASCIONE
Managing Editor, Content Services

As wearable technology, augmented reality (AR), and virtual reality (VR) become more mainstream and more available to educators, many innovators are looking at how combining such technologies can impact classrooms in the future.

What if a piece of wearable technology could sense a student's stress and offer access to mentors and coaches with just a click of a button? Or imagine a group of students curious and eager to learn more about another culture. What if they could use AR to interact with groups of students from different countries to work on a shared project without ever having to leave the classroom?

A new publication from KnowledgeWorks, Leveraging Digital Depth for Responsive Learning Environments, explores the potential future impacts of using wearables, AR, and VR in the classroom and other learning environments. The report also encourages educators to develop a critical filter to sift through the hype and determine the value and use of these new technologies.

"Often educators are given market-driven approaches to implementing technology in the classroom that end up being ineffective," says Katherine Prince, senior director of strategic foresight for KnowledgeWorks. "It is our hope that educators can use this research to think critically about how they can use emerging technologies to benefit their students' unique needs."

Prince and co-author Jason Swanson, director of strategic foresight for KnowledgeWorks, presented the report during CoSN's 2018 conference in March.

The report explores how technologies such as wearables, AR, and VR could potentially support current learning environments and create new opportunities to engage students, personalize learning, and build learners' social-emotional skills through a deeper understanding of themselves and others' experiences.

To help educators and education technology leaders explore these technologies, the paper features in-depth research on the potential future impacts, along with insights and implications for education stakeholders to consider when evaluating potential uses of wearables, AR, and VR.

Educators might be able to use these technologies inside and outside the classroom to add a layer of "digital depth"—the layering and integration of data, computing, and connectivity atop physical reality—to create more responsive learning environments. Three kinds of spaces emerge from the growth of digital depth:

- **Enhanced physical spaces** are grounded in physical reality but have a thin layer of digital information capture, sharing, and feedback. They have relatively low digital depth. Wearables are effective in creating enhanced physical space.
- **Hybrid spaces** use multiple digital layers and more extensive computer-generated content, connectivity, and experiences to enable experiences that have a higher degree of digital immersion but which are still anchored in physical space. Hybrid spaces have moderate digital depth. Augmented reality creates hybrid spaces with new capabilities for collaboration, visualization, and creation.
- **Fully digital spaces** provide full immersion in digitally created environments with little reference to physical space. Because of their high levels of digital depth, they can allow for novel world building and for shifts in identity and perspective through embodiment, or taking on the identity and context of another person or character. Virtual reality supports the creation of fully digital spaces. eSN

Leadership

continued from page 10

gle to transform their own programs. His message to them?

"You are responsible for both student and adult learning in the digital age, so be the one who can help develop your teachers and introduce them to relevant, instructional practices and tools. Secondly, tell your story. It's not about bragging or showing how great you are; it's about showing what you have to offer your community.

"It's important to encourage students to share their stories by providing a space on your school's websites or in their buildings. The library is a place to explore and discover. Sometimes that can be found in a book, sometimes it's in an experience such as a makerspace, or by being given an opportunity to create through code. However it happens, allow them to celebrate that discovery and exploration by sharing their stories." eSN

Margaret Cole is a freelance education writer based in Albuquerque, New Mexico.

How do I share something difficult with my colleague?

Here are some strategies for sharing your feelings or concerns in a professional manner

BY JENNIFER ABRAMS

*[**Editor's note:** This is the eighth installment in Jennifer Abrams' 'Personal Development' column for* eSchool News. *In her columns, Abrams focuses on leadership skills for anyone working in a school or district.]*

Something happened. Your colleague said something you found a bit harsh or inappropriate. Something inaccurate or uncalled for. She said it to you. Or to a student. Gulp.

You froze. It was an "ouch" moment. Now what? Do you run out into the parking lot and gossip about your colleague? Do you call your spouse or partner to complain? Or, do you figure out a humane and growth-producing way to share your feelings or concerns with your colleague?

I wrote Having Hard Conversations and Hard Conversations Unpacked: the Whos, the Whens and the What Ifs because I saw actions that were educationally unsound, physically unsafe, and emotionally damaging to educators and to students and I didn't have the skill set to approach the individual in a way I felt was appropriate. That wasn't all right for me.

I needed some strategies.

There many tools and tips for planning and scripting challenging conversations. Some take more time than others. Let's say, however, that something happened in a meeting, in a walk through, or in a hallway and you would like to address the behavior in the short term, within 24 hours, and you don't have a lot of time to plan. What might you say that would be assertive but not overwhelming? Clear, but not too aggressive? Here are a couple of short scripts you might consider.

Script 1:

"I noticed… I am beginning to think… Can you see that too?"

This script shares with the individual that you noticed a behavior or an action and your brain drew a conclusion and interpreted it in a certain way. You want them to know how you saw things. It stays on "your side of the net," so to speak, but does articulate your interpretation of the experience without being accusatory in tone and jumping "over the net" to assume motivation.

A couple examples: "Mark, I noticed you said, 'What do you want?' in a pretty loud volume when the student came to see you at your desk. If I were that student I might feel a bit intimidated about coming to ask you a question if I got that response. Did you sense that she was a bit shy in responding to you? What's your take on what happened?"

"Jessica, when you said, 'The teachers at the secondary level are always doing things like that,' I felt disrespected because that was a generalization about all of us that I feel is untrue. Can you see why we could be hurt by your comment?"

Script 2:

"When you did… I felt… It'd be helpful if…"

This "I message" statement is taught to students in elementary school and we assume children should know how to express their feelings in a mature manner through this set of sentence stems. I see adults in schools needing to use this set of stems as well!

Script 3:

I was not my best adult self at a meeting a while back and my colleague, Melissa, came up to me a day later (while I was alone) and said, "I am sorry I didn't have the information you wanted for the meeting, but when you rolled your eyes and made a face, I felt disrespected. Could you please be mindful of your body language?"

I was embarrassed when Melissa shared her feelings with me, but I knew I needed to grow up and be my best adult self and she was in the right. Her short, hard conversation with me was humane and appropriate. Educators need tools to have these hard conversations and we need to be mature enough to hear those who share these comments as well (more on this in a future column).

Adults in schools are modeling for students how to be civil and mature with our words. Scripting before we speak helps us self-regulate and be more caring while we hold each other accountable to do what is best for students and for our schools. eSN

Jennifer Abrams is an international education and communications consultant. She considers herself a voice coach, helping others learn how to best use their voices–be it collaborating on a team, presenting in front of an audience, coaching a colleague, or supervising an employee. Abrams' books include Having Hard Conversations, The Multigenerational Workplace: Communicate, Collaborate, and Create Community, and Hard Conversations Unpacked: the Whos, the Whens, and the What Ifs. She has also created a Corwin Press e-course. Abrams writes a monthly newsletter/blog, Voice Lessons, at www.jenniferabrams.com. Follow her on Twitter @jenniferabrams.

8 apps and tools for classroom SEL

BY LAURA ASCIONE
Managing Editor, Content Services

Social and emotional learning (SEL) has quickly become a cornerstone of K-12 education, because it helps students regulate their own emotions and teaches them to respond kindly to their peers.

SEL helps students build intrapersonal and interpersonal competencies. When students cultivate important social and emotional skills, such as self-management and social awareness, they can improve their success along with the school climate.

SEL focuses on five core competencies: self-awareness to help students recognize emotions, thoughts, and behaviors; self-management to help students successfully regulate emotions, thoughts, and behaviors; social awareness to help students take the perspective of others, including those from diverse backgrounds and cultures; relationship skills to help students establish and maintain healthy and rewarding relationships with diverse people and groups; and responsible decision-making to help students make constructive choices about personal behavior and social interactions.

Research shows that school leaders believe SEL is a huge benefit to students. In fact, 98 percent of principals in a recent survey said they believe students from all backgrounds would benefit from learning social and emotional skills in schools.

Those principals said SEL can help improve school culture (99 percent), help students grow to become good citizens as adults (98 percent), improve student-teacher relationships (98 percent), and decrease bullying (96 percent).

Schools are developing plans to incorporate SEL into classrooms, but progress is varied. Thirty-five percent of surveyed principals said they have a plan for taching SELand are systematically implementing it school-wide, and while 70 percent said they expect all teachers in their school to teach students social and emotional skills, just 25 percent said that expectation is fully realized in their school.

Below is a list of apps and resources to help teachers and students build SEL. (Note: Editors have not reviewed the apps or resources.)

1. Calm: Because Calm allows for a ton of customization, teachers can engage students in a collaborative whole-group discussion on how to choose peaceful background noise and animated images for the day. Teachers could also set up a relaxation station in their classroom for students to use the app—with attached headphones—at their leisure after instruction. After recess or before a test, consider using this app in a whole-group session to help students relax or transition to a new activity.

2. Pairin: Teachers can use Pairin in their classrooms or in professional learning communities. Using an in-service meeting to collaborate with school counselors and other character-education professionals could help boost professional development. Logging into the teacher dashboard quickly shows the overall perceived climate of the teacher's classroom based on student responses.

3. Positive Penguins: Positive Penguins is an award-winning, top ranked, fun educational app developed to help children understand why they feel the way they do and help them challenge their negative thinking. The app aims to help children understand that feelings come from their own thoughts—not the situations.

4. Touch and Learn – Emotions: Touch and Learn – Emotions can be an extremely useful tool for helping kids who are struggling to relate to and empathize with other kids, or who find it difficult to express their emotions using words. Be sure to use all of the settings to customize play, focus on certain emotions, and add your own lists. After kids practice identifying emotions on this app, act out some of the facial expressions and body language for various emotions to see if they've made the connection between the images and words that they've seen and heard with active expression.

5. Peekapak: Peekapak ties in most easily to existing ELA curricula. Though many lessons could potentially stand alone, they really work best as a full package. That means teachers should plan for two 20- to 25-minute lessons per week for four weeks for each of the 10 units. If there's not enough time to do the full curriculum, teachers should be thoughtful in their choices of which lessons to skip so they don't lose the advantages of exploring topics from multiple angles. Or, perhaps better yet, they could do full units but only some rather than all 10.

6**. Breathe, Think, Do with Sesame:** Children help a Sesame Street monster friend calm down and solve everyday challenges. Tap and touch to help the monster friend take deep breaths, think of plans, and try them out. Children are exposed to important emotional vocabulary, a calm breathing technique, personalized encouragements, and more.

7. Mind Yeti: Teachers can begin by letting students watch the instructional video that introduces the Mind Yeti and the group of Hububbles, which are thoughts that can cloud the mind. After whole-group instruction, teachers can introduce students to the expectations of where to sit or stand for these sessions. After a few practice sessions, assign a weekly Mind Yeti leader who can take the app with a small group to a corner of the room to practice leadership and communication skills.

8. Middle School Confidential: Middle School Confidential is a book and app series from anti-bullying activist Annie Fox, M.Ed. The series targets ages 11-14. The book series, a fiction/non-fiction hybrid, is part full-color graphic novel and part smart-talk life skills. eSN

The best edtech PD isn't about technology

3 ways to provide professional development that can bridge the divide between investments, implementation, and outcomes.

BY THUAN NGUYEN

Schools and districts spend billions on edtech, even while questions continue to swirl around whether such investments yield solid returns. Few companies can reliably ensure the educational outcomes that teachers and administrators expect, and according to one estimate, only 35 percent of edtech tools purchased are actually being implemented.

Barriers to successful implementation often have little to do with the technology itself or teachers' comfort with technology overall. Instead, success is impeded by a lack of strategy on how to integrate the technology into the classroom. Even as they spend up to $18,000 per teacher per year on professional development (PD), schools and districts have underinvested in quality PD that focuses on the skills and know-how educators need to make edtech effective in the classroom. It's not from a lack of demand, though—research nearly always suggests that educators are asking for more and better training.

District leaders must meet this demand and provide the very best edtech PD by focusing less on the technology itself and more on fundamental pedagogical strategies that can bridge the divide between investments, implementation, and outcomes.

Focused instructional decisions

The promise of edtech stems, in part, from its ability to generate data that can inform instructional strategies. Data can inform small-group instruction, help teachers pair students, identify gaps early, and even challenge conventional wisdom about how and why learners construct knowledge.

Whether that means using AnswerGarden to collaboratively build a word cloud to assess how a class is absorbing material or using Perusall to review a group of students' "confusion report," there are plenty of tools teachers can leverage to make data-informed decisions about their instruction.

Effective PD should share best practices and tools that will support teachers in maximizing their instructional time by using the information they get from those tools to become laser focused on students' specific needs.

The collaboration conundrum

Education can be an isolating profession. Teacher-innovators often feel like they are working in a vacuum that offers few opportunities to engage with and learn from the experiences of their peers. That's not surprising when so much of their PD seems to ignore the value of collaboration. Just 9 percent of professional-learning opportunities offered to teachers have collaborative formats.

Effective PD should provide teachers with opportunities to engage in meaningful collaboration. Collaboration is at the core of the PD services offered by AVID. Participants have opportunities to work with one another, ask questions, share ideas, and challenge thinking in every activity. Relationships are carefully developed throughout the training to produce a safe, trusting environment in which teachers experience rigorous hands-on activities that they can take back to the classroom.

This sort of interaction also lays the foundation for conversations that challenge existing views and pedagogy, allowing teachers to consider the more innovative and inclusive teaching practices afforded by digital tools.

Match outcomes and strategy

Effective PD should provide teachers with instructional strategies that go beyond explicitly teaching a new technology. The focus should be on learning goals first and digital tools second. Tech-savvy educators approach instruction by defining the content students need to learn and creating the context to ignite their curiosity. Only then do they determine how learning will occur and which digital tools might support and enhance that learning process.

During a PD session, for example, educators could take part in what AVID calls a digital jigsaw, researching best practices for digital organization and sharing their findings on Padlet or another real-time collaboration tool. Padlet lets group members take notes collaboratively and have focused discussions within the tool. This emphasis on note-taking in a digital environment helps educators support students in their construction of meaning using tools that match individual learning styles: digital ink, links to relevant resources to reinforce cognitive connections, meta-tags, graphic organizers, video, and sound.

Individually, these are disparate tools, but together they form a toolbox that can be accessed with a larger goal in mind. These strategies would be much more difficult to accomplish without the use of Padlet or a similar technology, but learning how to use the technology should not be the only goal. PD should allow learners to gather and discuss notes in a way that encourages them to process information in a more meaningful, deeper, and efficient manner.

By investing in smart PD, schools and districts can dramatically increase their educators' confidence with educational technology—while better ensuring that their investments in such tools will boost student outcomes. eSN

Thuan Nguyen, a former school district assistant superintendent and chief information officer, is executive vice president for AVID, where he oversees technical operations, products, and services and is responsible for AVID's digital strategy.

Top 5 TED-Ed Lessons on creativity

BY ELLEN ULLMAN
Editorial Director, Content Services

"Do schools kill creativity?" asks Sir Ken Robinson in the most-viewed TED Talk of all time (more than 51 million!). In the video, Robinson challenges schools to promote and inspire creativity, but it's difficult to know where to start, and some teachers aren't sure if it's possible.

"I don't think creativity can be taught," says Rayna Freedman, a fifth-grade teacher at Jordan/Jackson Elementary School in Mansfield, Massachusetts. "It's an experience that inspires students to think beyond their potential and see things differently. It's about giving them tools and choice to complete tasks and let them fly."

Other educators disagree.

"Everyone is creative in their own way," says Nicholas Provenzano, makerspace director at University Liggett School in Grosse Pointe Woods, Michigan and blogger at The Nerdy Teacher. "Too many people view creativity as a connection to the arts. The idea that creative students are the ones that can draw or effectively use glitter glue is nuts. Some students are super creative when it comes to solving problems or creating games during recess. Some are amazing storytellers."

Doug Johnson, a former classroom teacher who now serves as technology director for Burnsville-Eagan-Savage Schools in Minnesota, agrees: "One of the biggest myths is that creativity only belongs in the arts. We may think of creativity as a nice extra, but a lot of us have to be creative on a daily basis."

Johnson asks: "Do I want a creative dentist? I'd rather have someone who follows best practices and isn't experimenting on my mouth, but I do want a creative problem solver who will use nontraditional methods when the traditional ones don't work."

How to inspire creativity

Johnson recommends several things teachers can do to encourage creativity, such as asking for multiple possible answers to questions or giving points for "design" on assignments, in his blog post "Myths of creativity" and in his book *Teaching Outside the Lines: Developing Creativity in Every Learner.*

For Provenzano, creativity is about giving students a time and place to be creative. "I am always an advocate of teachers modeling what they want to see from their students," he says. "Teachers cannot give students multiple-choice tests and worksheets all year and then wonder why their students are not more creative."

If you're looking for more ideas and resources, here are the 5 most popular TED-Ed Lessons on teaching and assessing creativity.

1. The power of creative constraints

Imagine you were asked to invent something new. It could be whatever you want, made from anything you choose, in any shape or size. That kind of creative freedom sounds so liberating, doesn't it? Or … does it? if you're like most people you'd probably be paralyzed by this task. Why? Brandon Rodriguez explains how creative constraints actually help drive discovery and innovation.

2. Why should you listen to Vivaldi's "Four Seasons?"

Light, bright, and cheerful, "The Four Seasons" by Antonio Vivaldi is some of the most familiar of all early 18th-century music, featured in numerous films and television commercials. But what is its significance, and why does it sound that way? Betsy Schwarm uncovers the underlying narrative of this musical masterpiece.

3. Music and math: The genius of Beethoven

How is it that Beethoven, who is celebrated as one of the most significant composers of all time, wrote many of his most beloved songs while going deaf? The answer lies in the math behind his music. Natalya St. Clair employs the "Moonlight Sonata" to illustrate the way Beethoven was able to convey emotion and creativity using the certainty of mathematics.

4. How playing an instrument benefits your brain

When you listen to music, multiple areas of your brain become engaged and active. But when you actually play an instrument, that activity becomes more like a full-body brain workout. What's going on? Anita Collins explains the fireworks that go off in musicians' brains when they play, and examines some of the long-term positive effects of this mental workout.

5. Can robots be creative?

People have been grappling with the question of artificial creativity— alongside the question of artificial intelligence—for over 170 years. For instance, could we program machines to create high-quality original music? And if we do, is it the machine or the programmer that exhibits creativity? Gil Weinberg investigates this creative conundrum. eSN

Grit

continued from page 1

emerged as a significant predictor for long-term goals.

"How [do we] build grit in kids? The honest answer is, we don't know. What we do know is that talent doesn't make you gritty. So far, the best idea has been the growth mindset—the belief that ability to learn isn't fixed, that it can change with your effort," Duckworth says during her talk.

In the years since then, educators and psychologists have taken a longer look at grit, how teachers can foster it in classrooms, and how students can leverage it for long-term success.

"Grit is stick-to-it-ness, it's backbone, it's perseverance," says Dr. Laura Barbanel, former program director of the Graduate Program in School Psychology, where she trained school psychologists. Barbanel works primarily in private practice now. "Someone with grit has a certain amount of optimism, a sense of the possible, a sense of self-efficacy."

Making a plan, taking action, and keeping a sense of optimism helps develop grit, she says. Educators and parents can encourage students to develop grit using a few strategies.

1. **Advise parents** and talk to them about the balance between "doing for" their child and encouraging their child to do things on his or her own."

2. Focus on **what make a child feel empowered** to set and work toward goals.

3. **Make the plan of action and the goal doable.** "Teachers know this, but sometimes parents forget it," Barbanel says.

Dr. Caren Baruch-Feldman, a psychologist who works extensively around grit, says a three-pronged approach focusing on mindset, behavior, and teamwork can help students increase their grit.

4. Focus on passion. Duckworth talks about passion and perseverance for a good reason, Baruch-Feldman says. "Often, passion is left out. Engage kids—how can they get passionate about something and make a connection and persist?"

5. **Cultivate a "want to" mindset versus a "have to" mindset.** "Help students figure out why certain things will be important to them," Baruch-Feldman advises. "Sometimes as educators we skip that step, but it's hugely important. Once it's established and we agree on goals, I share with educators what we know helps build grit—optimism and a growth mindset. I teach them a little bit about what that looks like. How do you have an optimistic mindset? Not just talking about it, but doing it."

6. Use a **team approach** among educators and students to help build grit. "When you need to persist, or you have a setback, nothing is as good as talking to someone who will normalize that experience, who will pick you up and let you know you'll be OK," Baruch-Feldman says.

7. Teachers can help students, but often students build their grit when they **help fellow students**.

"If you look at really gritty people, they have a sense of purpose. When kids are helping others, they're tapping into that sense of purpose," Baruch-Feldman says. "When we're helping other people, it gives us positive emotions and it brings real connections."

8. It's important to have optimism and a growth mindset, but **behavior has to follow that** determination, Baruch-Feldman says. "Helping students understand the value of practice" is especially important in a world where people are used to instant gratification and don't always understand, or want to put in, the effort required to reach their goals.

"It's also terrific for parents and educators to model behaviors," she adds. "If we can share our failures, our challenges, how we rebounded, how we persisted, with our kids—that's a really important message." eSN

eSCHOOL MEDIA INC.

eSchool News covers the intersection of technology and innovation in education. We focus on how technology can help educators improve learning and deliver instruction more effectively, enhance the student experience, and transform their schools.

CEO	Rob Morrow	rmorrow@eschoolmedia.com
Vice President, Online Products & Services	Nancy David	ndavid@eschoolmedia.com
Editorial Director	Ellen Ullman	eullman@eschoolmedia.com
Managing Editor, Content Services	Laura Ascione	lascione@eschoolmedia.com
Creative Director	Chris Hopson	chopson@eschoolmedia.com
National Director of Sales and Business Development	Stephanie Ciotola	sciotola@eschoolmedia.com
	Caliann Mitoulis	cmitoulis@eschoolmedia.com
Senior Sales Assistant	Denise Crowe	dcrowe@eschoolmedia.com
Marketing Services Manager	Janice Budai	jbudai@eschoolmedia.com
Accounting & Vendor Data Director	Lee Calloway	lcalloway@eschoolmedia.com
Director of IT	Vincent Carlson	vcarlson@eschoolmedia.com
Web Comm. Specialist	Jeffrey Festa	jfesta@eschoolmedia.com

eSchool News ISSN: 1098-0814 is produced 4 times a year.

2275 Research Blvd. Suite 500 • Rockville, MD 20850
Phone: (301) 913-0115 • Fax: (301) 913-0119
eMail: ndavid@eSchoolNews.com
Home Page: www.eschoolnews.com

The cost for a subscription in the U.S. is $120/year, Mexico or Canada $158/year, all other countries $196/year. Please enclose a bank draft or international money order in U.S. dollars. Back issues of eSchool News are available for $15 each.

For reprint permission contact: ndavid@eSchoolNews.com

POSTMASTER SEND ADDRESS CHANGES TO
eSchool News, Circulation Department, 2275 Research Blvd. Suite 500, Rockville, MD 20850

Co-Founder Larry Siegelman 1954–2002