

Current Trends in K-12 Education



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Introduction

The field of education has come a very long way from the one-room classroom of the past. Every day, psychologists and developmental biologists are learning more about the human brain at all ages—and teachers and educators the world over may be able to teach better as a direct result. With new data being discovered daily about how individual students best learn and new tools being invented constantly to increase the educational resources at our fingertips, it is no surprise that K-12 education is evolving.

In this course, we'll look at some current trends in K-12 educations, talk about the developmental science and emergent learning philosophies upon which they are based, and ultimately discuss a few practical tips for creating a modern, connected classroom atmosphere in which every student is able to succeed. Let's first take a look at a couple of school environments which have decided to embrace current trends, with positive reactions by teachers and students alike.

Case Studies Regarding Trends in K-12 Education

Case Study 1

One school system has decided to go all-in on the trend of increasingly immersive technological experiences for their students, such as AI, AR, and VR (artificial intelligence, augmented reality, and virtual reality), on the basic principle that enabling communication in the best way possible is the best thing they can do for their students—as the students will only be experiencing faster-paced communication over the course of their lives. From using devices like Amazon's Alexa as an in-class assistant to aid with everything from quotidian logistics to off-the-cuff questions to immersing students more fully in their studies with AR or VR field trips, both teachers and students (per the results of a survey) are feeling like their in-class time is more productive, engaging, and—according to at least one student–'worth it'.

Case Study 2

A school system in Vail, Arizona educates over 10,000 students. In order to better serve their staff and students as well as to help their foundering budget, they decided to adopt a few different modern educational trends: they went textbookfree, they embraced open content, and they decided to invest in online and blended learning systems. They found that even though their new tech-centered system required them to buy laptops for all of their students that their costs were still lower overall (as opposed to the investment in new textbooks for everyone). They created a proprietary open-content system called Beyond Textbooks for their students to use as an educational system instead, and because of all of this were able to open their metaphorical gates to allow distance and blended learning to happen—which resulted in a larger student body, higher retention rates for students, and all for a lower investment than more traditional methods had allowed.

Takeaways from Case Studies

In each of these case studies, we see that deciding to invest in non-traditional educational paradigms has paid off for the institutions deciding to embrace them— not only literally, but also in quality of experience and education for the students and staff alike.

The surprising thing, however, is that such early indications and cases of schools going 'all in' on new technology and theories of learning have had such a high rate of success. As these are very new, burgeoning trends in the field of education, many of the trends we'll discuss in this course have not been widely studied as of yet; in many cases, there is just anecdotal evidence to show that they stand a chance of improving the educational paradigm.

Yet that is precisely what they seem to be doing. Perhaps this is because each of the trends we'll discuss in this course has at its root a deeper understanding of the psychology underlying effective education. We'll begin our discussion on current trends in education with the topic of classroom expansion.

Section One: The Necessary Expansion of the Classroom

As we are learning more about how students learn, it is becoming increasingly apparent that the one-size-fits-all educational paradigms of the past are not primed to be practical or effective for best teaching every individual student. Different students learn in different ways; some may find lectures helpful, while others—equally driven, equally intelligent—may have a hard time staying quiet or still for the length of an average class period.

Delving into the recent research on how K-12 students learn best has shed light on several disparate learning philosophies. These different learning philosophies or modalities can inform teachers as to good strategies for managing their

classrooms, brainstorming educational opportunities, and reaching their students where they are.

However, because these differing learning modalities are so widely varied, they can make practical and efficient teaching strategies increasingly difficult. Brainstorming ways to reach out to students exhibiting different learning modalities to make communal education engaging and effective for everyone will be a major goal of teachers moving forward.

What are the different learning philosophies to which students can relate?

In addition to being naturally inclined to absorb information in different ways (for example, by reading or note-taking), students subconsciously learn best in different mentally-structured ways. These can begin with the different ways information is first perceived—for example, aural learners may do best with lectures they can listen to—but we are learning that the connection may go deeper than just the initial introduction of new ideas. Let's take a brief look at the different learning philosophies recently uncovered by educational researchers:

Aural

Students who are aural learners may tend to remember ideas best which are verbally presented to them. Because of this, learning through a lecture format naturally attracts the aural learner. Aural students are good listeners who may be easily able to repeat patterns of words or letters just by hearing them once. You'll be able to identify an aural learner because he or she will enjoy talking, dialogues and debates, dramas, and music; and there is a very good chance that he or she will repeat instructions back to you once given just to ensure comprehension.

Physical or kinesthetic

Kinesthetic learners are those who learn by doing. They will be the ones in classrooms who fidget often, or look for excuses to move. When sitting through a lecture, they may look bored or zoned out; their dynamic creativity will come into play, however, as they will be the students who like to try things out and manipulate different objects once they come into contact with them. You will find that they will talk with their hands often, and enjoy working with music as it gives them a natural beat to move along to.

Visual

Students who are visually inclined often learn best by watching and seeing—so giving demonstrations may be a good strategy. Fill your classroom with colorful, visual stimuli (think: graphs and pictures). When they are learning, they often rely upon imagination and their 'mind's eye' in order to conceptualize a difficult topic. You'll often be able to identify this type of learner because they will stare; they may respond better when you give them something to watch. They may be quiet and impatient, particularly if they are asked to listen or read. Generally speaking, this type of learner may prefer media and arts to other disciplines.

Haptic

Those learners who prefer more 'hands-on' learning atmospheres are said to have a haptic sense of learning. The sense of touch, for these students, helps them remember things, and they may be more successful with tasks which incorporate digital manipulation. These students may often fiddle with small items; they may doodle in the margins of their notes, for examples. Puzzles and doing artwork may be particular favorite activities of the haptic-style learner.

Interactive

Learners of the interactive modality may learn best through verbalizing their thoughts to others as they process what they are learning. These types of learners may enjoy having others around as sounding boards. Question and answer sessions attract this type of learner, who enjoys discussions, as opposed to lectures or reading assignments. You may be able to identify this type of leaner because they will often enjoy talking at great length and may have difficulty being quiet for long periods of time.

Print

Those who learn most naturally by print take information in best by reading it. They're often able to recall anything they see in print—either in a book or on a board at the front of the class. They can be perceived as 'bookworms' by their peers because they often will love reading, whether it be books or magazines. They will enjoy taking notes and writing on the board.

Olfactory

Finally, learners who learn best through an olfactory modality find that they associate new information best with smells and tastes. These students may find that, in particular, smells are associated with specific memories; they may be able to identify different smells with high levels of precision.

This is a wide range of differing learning philosophies. In modern classrooms, it's expected for teachers to learn which educational method works best for each of your students and find a way to reach them in that specific way. However, many teachers have many students, which makes that level of investment in each student unwieldy and—in some cases—impossible.

Perhaps the biggest common thread linking many of these modern educational trends is that we are realizing the ramifications of truly understanding that no two students are the same. However, another crucial fact we are realizing about students is that even though each has a specific learning tendency, no student is absolutely the same every single day in school—and it's very likely that many students will lean towards a few different methods of learning.

To help increase the availability and relevance of your teaching style, then, one strategy might be to use the Internet to facilitate diverse learning experiences on a day to day basis. Other strategies might include expanding your classroom to include learning opportunities outside of your physical location. In any case, modernizing our approach to education in order to better educate is the foundation underlying most current trends in K-12 educational philosophy. Next, we'll look at the ways technology and out-of-the-box thinking are opening up doors for classroom expansion in schools all over the world.

The Role of Technology in Modern Classrooms

Technology is allowing many students to transcend geographical and even financial barriers which might have interfered with access to a good education in the past. Embracing the tools which allow learning to occur unencumbered by distance can help reach multitudes of students the mainstream educational model had before not been able to assist.

However, a growing number of educators believes that using technology to educate may have another benefit for students. Increasingly, technological devices aid nearly every interaction we enjoy with others, particularly those outside of our immediate families and communities. This same technology facilitates many steps of our daily routines. By equipping students with an innate understanding of how technology works, teaching them how to teach themselves about new Internetbased tools, and exposing them safely to the always-new, always-better model of evolving technology, teachers are preparing their students to assimilate well within the world of their future.

Technology has the capability to transform the way we learn and teach through practical applications such as distance learning and internet-enabled classroom

experiences. By brainstorming clever uses of the Internet, we can also find ways to better reach every child where they are—whether that's a physical, remote location, or on a more metaphorical level, wherein each student can be taught according to how they learn best.

What role can the Internet play in creating healthy and educational classroom experiences in modern schools?

In the past, teachers have been limited to what they can describe, portray on a board before the class, or what is written in books in order to excite their students' imaginations and passions for learning. As more resources have become available—from color photographs to video presentations—teachers have always turned to the cutting-edge novelties within their fields to immerse their students in what makes their subjects interesting.

As we move into the future, the resources we have available to us to reach our students are becoming more and more realistic, impressive—and accessible. Increasing our research into the way students learn is showing us that not only do students learn in different ways—for example, learning best by doing, reading, listening, or speaking—there are different philosophies by which they learn.

In many cases, using the Internet to cater classroom experiences to a wide array of learning styles and philosophies is allowing teachers to reach more students more successfully. Internet-enabled classroom experiences use Internet-based tools or apps to improve the classroom experience for each individual student.

What are some specific ways that educators can utilize the Internet to enhance classroom time, educational access, or even teacher-student or student-student relationships?

From eliminating or reducing paper-based busywork to helping students access resources they would never see otherwise, here are a few different ways that the average classroom can become more connected:

- Interactive displays that allow each student to write on a board at the front of the class via their own smart devices can increase a sense of interactivity in the classroom during traditional slide-based lectures. This can also streamline student-teacher communication and allow students to feel as if they are more involved and responsible for stellar class content.
- Smart scanners enable students to take scan information from textbooks and import it into their notes for easier manipulation (and less rote notetaking). This also allows students to take advantage of text-to-speech apps;

students who might not learn best by reading may be able to learn the same information when it's being read out to them. Students who learn best by taking notes will still have the option to do so, but students who learn differently will appreciate this forethought.

- Virtual classroom technology with platforms onto which teachers can upload slides, assignments, and other resources and which students can access at any time (and even submit assignments, ask questions of the teacher, and participate in discussion groups with their peers) decrease excuses for low attendance and increases the likelihood of homework being submitted on time.
- Online, open-source educational platforms are being used as resources for basic coding languages: students all over the world can log in and learn how to code for free. Not only is this a real-world opportunity for children to learn how to code; it's also a way to feel connected to a global community and to have instant feedback on the accuracy and efficacy of their code.
- On-demand video platforms are allowing teachers to create formal educational presentation videos and even informal check-in videos for their students which can be accessed from any device. This facilitates distance and mobile learning and can open pathways of communication for students who may not feel comfortable approaching adults in person or raising their hands in class.
- Internet providers are working with many educational systems to create what are known as 'rolling study halls' or 'smart school busses' to allow students to connect to the Internet who may not have home access. Not only will this increase Internet availability and possibly extend productivity, it may result in safer bus experiences for both students and drivers.

There is virtually no limit to the number of ways that the Internet can help streamline processes within the classroom and expand the classroom for students worldwide. Each discipline has a world of resources to explore as well: from virtual tours of the Louvre to live-streamed archeology digs, there is no shortage of ways to help students connect with their education, no matter their learning modality.

What is distance or mobile learning?

Distance learning is, very simply, a way to learn without having to have regular face-to-face contact with a teacher in a classroom. Distant or remote learning differs from homeschooling in that, while a student may be at home (or anywhere), instead of being self-taught or taught by a parent, they are still being educated and evaluated by a professional educator in a formal program; however,

all communication simply occurs without being in the same room—most often, with considerable assistance from the Internet. Distance learning also differs from traditional homeschooling in that the student is still part of a class community which still conferences often via protected, safe, monitored chat rooms and discussion boards.

One of the benefits of distance learning is that it often sets students up to be able to enjoy and continue their education even in the midst of events which might preclude their being able to physically go into school each day—for example, a prolonged sickness, or bad weather. Having distance learning systems set up just in case of a worst-case-scenario is never a bad idea.

Going Beyond the Field Trip: The Physical Expansion of the Classroom

In addition to expanding the classroom with technology by delving into the web for internet-enabled experiences and increasing resources for remote or distance learning, there has been a trend in the last few years in getting the children back out of the classroom—by making the world one gigantic, immersive academic experience.

What are some ways that teachers can consider expanding the classroom physically through (literally) extra-curricular projects, activities, and experiences?

It may take some extra work on the part of the staff, but teachers have the world at their fingertips when it comes to creative extra-classroom experiences for their students. Within every subject and discipline there are myriad ways to create experiential, hands-on applications for learning.

Here are just a few ways this could be practically applied in school districts nationwide:

- Schools could form partnerships with nearby zoos and wildlife reserves to give children information about the animals and even access to insider activities like feeding the animals for biological science projects and reports
- Schools could form partnerships with nearby green or clean energy laboratories and do projects comparing solar and wind energy to conventional sources of energy

- Schools could form partnerships with nearby farms to learn more about the science of food production and the mechanics and marketing of the supply chain moving food from farm to consumer
- Schools could reach out to local artists to give children hands-on experience with pottery, painting, mural work and other forms of applied art

Any industry in which young people could take on internships or apprenticeships might be worth looking into! This is truly a place and a paradigm in which creativity has no limits. The main thing to keep in mind in order to truly expand the classroom is to go beyond the field trip and, indeed, to go beyond what we traditionally think of as the academic disciplines to offer our students ever more specialized—and ever more practical!—learning opportunities.

The Changing Role of the Teacher In the Expanding Classroom

As we move to a more digitized or decentralized classroom-classrooms in which hands-on experience, external experience, internet-enabled experiences and 'flipped' teaching becomes the norm, will the role of the teacher be minimized-or will it become even more essential?

Professional educators are incredibly necessary assets for students. Bringing together resources and opportunities, learning how to reach each student on a level that is practical, achievable, and still personal, and managing all of the standardized requirements to which every student nationally is still expected to reach-these all take considerable experience, time, and skill.

While—as we will discuss in further sections—the main framework of a classroom might be flipping, expanding, or becoming digitized, the essential connection between teacher and student (and between students) must still be fostered. It is Y S. CON up to today's teachers to help build tomorrow's classrooms!

Key Concepts

- One significant trend in modern K-12 education is the expansion of the classroom. This can be a physical change, such as a renewed focus on making your community your academic workplace.
- The classroom can also be expanded in terms of mobile and distance learning via the internet. Embracing AR, AI, and VR may take a bit of an investment up front to set up, but students and teachers alike are reaping the benefits.

- Another trend in modern education consists of personalizing a student's education to their learning philosophy. However, it must be noted that teachers cannot personalize individual educations for each student without learning how to first expand their classroom, otherwise they will get overwhelmed.
- Expanding the classroom and allowing each student the individualized experiences that they require for an in-depth, rewarding education go hand in hand in terms of both execution and benefit for teachers and students.

Reflection Question

What are some concrete steps you can take to make the world of your classroom a little wider for your students? Do you think it will better assist your students to invest in internet-based learning opportunities or the physical expansion of your actual classroom?

Section Two: The Implementation of Science-Based Learning Theories

As we learn more about how students learn, it's in everyone's best interest that we update the way we teach. This may result in the upheaval of decades of ingrained educational habits. Change is difficult, but when studies show that taking a different approach to education can improve outcomes for students, changes must be made.

Why is it important that teachers stay up-to-date with new learning theories and strategies?

We're learning more and more about children every day—how to best reach them academically, how to keep them safe, how to take care of their creative and empathetic sides, and ultimately how to help them grow into the best versions of themselves. While we've always done the best with the tools that we've had, teachers have a responsibility to learn about new methods and new tools that are continually being built for the better experience for the children.

Ultimately, it is the duty of a teacher to give the best educational experience possible to his or her students. If it is shown that students learn better with a different type of teaching style, the teacher owes it to the students to learn how to teach better every day.

Many current trends in education center around the students' experience. We'll delve into several of these in this next section.

Educational Trends: Turning Past Paradigms Upside-Down

Much of the research delving into the psychology of education is causing a small revolution in practical educational norms. Whereas—for efficiency's sake—students were taught with an extremely universal approach, we are now seeing a trend towards **personalized learning**. Even the standard of being introduced to new material at school and studying or completing homework at home, after hours, is being disrupted with flipped classrooms.

What is the concept of personalized learning?

Personalized learning is-very simply-the removal of a 'one size fits all' learning approach in which the way lessons are formulated is standardized across the student body. Instead, with personalized learning, teachers seek to meet each individual student where they're at, with learning methods that complement the way each specific student best understands new information.

The trend of personalized learning has been met with criticism, and it has polarized some members of the educational community. This is partially because aside from the above very general umbrella definition, there is no agreed-upon method or strategy which is universally known as 'the personalized teaching way'. This has caused the trend of personalized learning to be cast in an occasionally hyperbolic light—making it ripe for ridicule.

There are several myths surrounding personalized learning which have made their way around the academic community. It may be easier to begin by defining what personalized learning is not, rather than it is! Personalized learning is not:

- A mere shift towards self-driven student work, almost exclusively on a personal device. Personalized learning is not computer-mediated learning.
- A paradigm in which every student works independently, never as a classroom community. While each student does learn to be focused on personal knowledge, much of the instruction does still take place with small-group or whole-classroom engagement.
- Another term for 'students moving at their own pace'. There are those who seek to write off the personalized learning movement by stating that it's always existed under another name. This is an overly simplistic generalization.

Having established that personalized learning is not a form of student isolation, computer-mediated learning, or simply self-paced learning, what is it? How can one implement it in one's classroom?

- Personalized learning is, first and foremost, an approach to learning—not a method. There are methods which may align well with personalized learning, and each teacher can select their own courses for doing so (likely with regard to the specific students they are teaching.)
- One way that teachers might implement personalized learning is through the establishment of individualized learning plans for each student, as well as embracing project-based learning in which each student takes from assigned projects their focuses of choice.
- It is important to note that personalized learning still requires students to meet academic norms. Teachers and students will work together in order to prepares the students for standardized assessments and other objective benchmarks of success.
- One through line of personalized student is simply—but crucially—student involvement in the educational process. In personalized learning systems, the student meets frequently to speak to teacher regarding goals and evaluations.
- Ultimately, fully implemented personalized learning systems are a bit more like traditional college systems, wherein an undergraduate student has an advisor, must take general ed courses, but can veer off to specialize under guidance.
- It is important to note that personalized learning is not a substitute for formal, guided special education for those with special needs. However, teachers leading personalized learning classrooms may find that this approach to classroom learning can work well in accordance with an IEP (Individualized Education Program) for a student with special needs, as the framework of an IEP is loosely similar to a student-chosen personalized learning plan.

Is the trend of personalized learning more work for the teacher than other trends in modern education?

While the answer to this question is certainly up for debate and comparison, on the whole personalized learning does tend to be extra work for the teacher due to the formation of individualized learning plans as well as meeting with each student to discuss goals regularly. However, this can be mitigated, and the benefits of meeting with each student within their comfort zones on their education are manifold.

How could a school work to implement personalized learning for its students?

Every school will differ in its implementation of this approach to learning, but four successful models have been:

- The use of **learner profiles** for each student: A learner profile is a detailed record that provides teachers and students at the school an understanding of the student's strengths, motivations, needs, and goals. They tend to be living documents, reviewed often by administration, parents, teachers and students and updated regularly. These profiles can aid the teacher in understanding how best to help the student, and help the student communicate whether learning methods currently being used are working for his learning style.
- The use of **personalized learning paths**: Much like setting up a concentration in higher education, a personalized learning path enables a student-teacher team to make up a schedule that works for his specific education strengths and aims. Based on frequent feedback and constant support and monitoring, a personalized learning plan might include small group work, individual study time, presentation-based learning, projects, and even one-on-one tutoring.
- The use of **competency-based progression**: Instead of taking regularlyscheduled exams with pass or fail grades, the student is given many chances to show competency in a certain subject in ways geared to help them truly integrate the subject without the sterile, high-pressure feel of a scantron exam. For example, a student in the sciences may be asked to talk about what he knows about chemistry while cooking, or about biology while caring for an animal; a student taking math might be asked to show what she knows while in a retail internship. The school would make it very clear which objectives the student should focus on attaining competency within, and these objectives would not all be purely academic; for example, a competency might be resilience, rhetoric, or patience. Each competency once achieved would allow the student to move deeper within the subject or skillset.
- The use of **flexible learning environments**: Within flexible learning environments, schools carefully observe their students and design their classrooms and schedules around what the students need most from their education. This might vary on a week-to-week basis and may include individual study time, small groups working together on projects, one-onone tutoring, excursions, and presentation-based learning.

What is a 'flipped classroom'?

Again, let us first define what a flipped classroom is by discussing what it is not. In past educational paradigms, students have been introduced to new subject materials in-class via presentations or other means of passing information. They have then been sent home to work through study materials to ramify that information—in other words, they get taught at school, and then they have homework.

One of the fundamental concepts or arguments behind flipped classrooms is simply that a student can watch a lecture anywhere. Teachers, according to this educational trend, are more valuable when they're able to be a much more accessible resource for their students—and class time is more valuable when spent on activities and complex projects that ramify the content learned by watching lectures at home.

Another driving concept of flipped classrooms involves ensuring that the students have the resources they need, when they need it the most. For example, in one common flipped classroom setup, students watch pre-recorded lectures at home, then simply fill out homework while they're at school—with the teacher there to help guide them through it, or answer any questions that they may have. This alleviates the burden on parents of having to be well-versed in often complex subject matters in order to aid with their children's homework, and it also ensures that any misconceptions the student has about the subject matter are rerouted early on.

What are specific activities that students can do at home to support the flipped classroom paradigm?

Remember, in a flipped classroom setup, new material will be introduced at home to support activities and work during valuable classroom time. Taking in that information can happen in a multitude of ways, including:

- Sending your students a link to an online lecture they can watch, whether it's something you found or something you personally recorded
- Read or otherwise peruse online material, such as an article to which you have sent them a link
- Go through a Powerpoint presentation which you have made available to them
- Spend some time discussing material in a (safe) online chat room you have set up for your students

• Perform exploratory research on a subject; for example, attempting to find the answer to an open-ended question you have assigned them

What are specific activities that the students can perform in class to support the flipped classroom paradigm?

In the flipped classroom paradigm, in-class time is spent doing meaningful activities which support the incorporation of the information the student has reviewed on his or her own time. These types of activities are not limited to, but can include:

- Practicing a specific skillset with guidance from the teacher (for example, measuring or weighing items with precision and accuracy)
- Having a round-table discussion about the text or slides the student reviewed on his or her own time
- Participating in a staged debate around a question that was assigned to the students previously
- Giving the class informal (or formal) presentations about the information the student reviewed on his or her own time
- Going around the classroom from station to station, each of which has a teacher-created activity or hands-on model to help bring the text to life
- Laboratory experiments
- Assessment of peers and review of other work, as deemed appropriate by the teacher

What are the pros and cons of teaching with a flipped classroom setup?

As with any change to an established norm, there will be benefits and growing pains while the new format becomes the new normal. There are several criticisms which have already been made of the flipped classroom format. These include:

- The fact that the flipped classroom setup often requires students to have a working internet connection from home
- The fact that this method depends upon students dedicating a set amount of time after hours to taking in new information, often without parental support

- The fact that sending students home to view lectures does not cater to different learning types (particularly students who don't learn well through a screen).
- The fact that flipped classroom setups do require more work, often, on the part of the teacher.

However, there are many benefits to the flipped classroom paradigm. Students have reported enjoying their in-class experiences more, and teachers are often able to delve further into their topics because they don't have to spend time going over basic concepts that many students can easily first learn on their own.

Ultimately, flipped classrooms require flexibility on the parts of students, parents, and teachers, as well as extremely methodical and intentional content that is put together by the teacher with this method in mind.

What is a 'student-centered' classroom? What is the difference between teacher-centered learning and student-centered learning?

A student-centered classroom focuses on experiences that cater to students' interests, learning strengths, and how the student will use the information in his or her day-to-day life. This is different from a teacher-centric classroom, in which the focus is on the teacher and how her or she best decides to disseminate information.

The distinction can be subtle! Here are a few measurable ways in which a studentcentered classroom may differ from a teacher-centered classroom:

Teacher-centered learning may:

- Focus primarily on instruction and presentation by the teacher, to the students—in other words, featuring a lot of teacher lecturing and students listening
- Use formal, precise language—talking about subjects as the teacher is familiar with them
- Generally require students to work alone on individual homework or projects after listening to a lecture
- Feature constant teacher guidance and correction if and when students are asked to speak
- Incorporate subjects chosen and curated by the teacher (or governing administration)

- Include questions from the students, answered by the teacher, with no argument or discussion by the students afterward
- Culminate with the teacher evaluating each student and marking that grade or score down for parents and administration.

By way of comparison, student-centered learning may:

- Include an equal focus between the student and teacher
- Use informal language—the language in which the student might use the information on a day-to-day basis
- Feature much more student interaction; a teacher might briefly model a scenario or skill, then spend much of a class period having the students practice and model for each other
- Request the students mostly work in pairs or small groups
- Allow students to speak freely, with the instructor mainly providing correction if necessary, at the end of a class period, or if a direct question is asked (i.e., letting the students 'puzzle [a problem] out' and naturally come to the right answer if at all possible)
- Allow students to answer each others' questions, or (respectfully, with good rhetoric, as modeled by the teacher) argue or clarify when the teacher presents an answer
- Incorporate student's self-evaluations, evaluations of each other's work, and the teacher evaluations when setting student scores for each term.

What are some practical steps teachers can take to help their classrooms evolve into systems for student-centered learning?

- Give your students the opportunity to take on open-ended projects: Allow students to choose a project that allows them do demonstrate developing mastery in several different objectives. This could be designing or building an object, starting up a school or community program, researching and writing a long work, or any of a number of other creative endeavors.
- Take full advantage of the latest and greatest in technology: Students in modernity are born into an age of technological advancement. Their personal devices and experience with the Internet likely go farther than any computer lab at school. Finding safe ways for them to use web tools, presentational platforms, and other device-centric methods of engaging with others and their subjects

speaks to students in a language they understand—and it also sets them up for a lifetime of working with cutting-edge, contemporary communication tools.

- Veer away from traditional worksheet-or-essay-based homework as much as possible; replace with in-class activities that are hands-on, engaging, and immersive: The movement of student-centered learning argues that students learn best by doing, not listening to a lecture or filling out worksheets at home. Similarly, in student-centered learning, following the progress of a student merely by monitoring homework completion and test scores is now thought to be a rather two-dimensional way of evaluating a student. Instead of relying on paper-based impersonal methods to teach students, teachers in student-centered classrooms focus on allowing students space to create, act, and speak in class. One major benefit of this system is that it gives the students autonomy—which drives excitement and creativity. If we are no longer handing students assignments with cookie-cutter expectations, they will be more interested in the potential they have to explore and engage.
- As much as is practical, refrain from punishments, rules, and definite consequences for (study or research related) mistakes: Along similar lines, student-centered classrooms often do not have consequences for breaking rules or many rules to begin with (within the academic sphere). Promote an environment of mutual respect and excitement for study, keep your activities upbeat and engaging, and allow your students to ask the wrong questions and get distracted by what interests them. Teachers serve as guides within studentcentered classrooms.
- When it comes time to evaluate your students, invite them into the process: Finally, when it comes time to assign grades or report to the administration or parents exactly how their student is faring in your classroom, take it as an opportunity to learn how the student feels their education is going. In studentcentered learning, students' perception of their success is as important as is yours. While it will always be the case that there are certain objective standards that students must meet to successfully navigate their schooling years, one important skill student-centered learning seeks to impart upon students is to become a critical evaluator of their own work.

What is maker learning?

Maker learning is a movement in education that is gaining traction in modern schools, but has its roots in trends that have originated in the past several decades.

Based on the work of constructivists like Jean Piaget and constructionists like Seymour Papert, maker learning involves interactive, project-based modules which are meticulously designed to build upon each other and strike a chord within each student individually.

What is constructivism?

Constructivism is an educational theory that seeks to build the knowledge and understanding of learners by building on the specific foundational experiences each student individually had before they came to school. It treats each student as a person with a background and as a member of a community and culture, and seeks to use that information to enhance the student's learning experience.

Constructivism is built upon the work of several philosophers, educators, and psychologists, but is perhaps best known by the father of the field—Jean Piaget, a cognitive theorist and Swiss psychologist working in the early-to-mid twentieth century.

What is constructionism?

Constructionism as it relates to education is a model in which each student is encouraged to construct a mental model in order to better understand the world that moves around them. Practically speaking, this theory challenges educators to step back and let students discover the world around them by using that which they already know to dig deeper.

By constructing their own mental models of the world and taking the initiative to make those models ever larger and more precise, students take ownership of their education—and their growing world views. Within constructionist education paradigms, teachers guide their students in discovery—which does not take less work on the part of the educator, but may be an exercise in patience and restraint.

Maker education brings these two theories together in one movement which puts the students at the center of the classroom, asks the students to explore and become aware of what is around them, and take on the agency of one able to help add to the world that they see.

What is the main theory driving maker education?

• In maker education classrooms, students will be guided into interactive, interdisciplinary, open-ended fields of study. The idea is to align projects that the students can really take ownership of with necessary educational objectives. The focus and expertise of the teacher will therefore be concentrated on assisting the students with gentle guidance and providing resources whenever possible.

- However, the deepest tenets of maker education delve into the heart of education: allowing students to find ways to contribute to their communities in meaningful ways. Allowing such freely-directed projects helps students tap into the resilience and knowledge of their community—and helps them realize their abilities to make the world around them better.
- Because of this community-centric (as well as student-centered) approach, one of the beautiful things about maker education is that it looks different in every schooling community. Maker education can occur with cardboard and pipe cleaner; it can also happen with high-end wool and acrylic paints. Whether students have access to an equipped test kitchen, old cars they can take apart and reform, or libraries to help them write the next great novel, maker education is specific to the student and emblematic of the community and resources they have recourse to as they self-educate.
- Ultimately, the main point of the maker education is simple: it seeks to equip the students of the movement to make—to create. It sees creativity as mankind's unique asset and the way to move communities forward, and therefore the strongest value and skill to impart upon the next generation.

What are some practical ways teachers can integrate the values of make education into their own classrooms?

Maker education is incredibly trendy in modern education, but it does raise some questions about practical implementation in a world in which standardized tests do matter and there are objective academic standards to which even the most free-minded schools must adhere.

Here are three simple focuses every teacher can implement, to the extent that they can, to incorporate the trend of maker education into their teaching strategy:

- Focus on Job Preparedness: Every academic speciality, from math to marine biology, has behind it career potential. From an early age, expose your students to the concept of daily work and careers, in every field. Consider it your job as the teacher to ignite the spark that might fuel a passion for a specific career—even if you're working with very young students. You're opening students up to a world of practical opportunities to give back to their communities, whether your students are future musicians, mechanical engineers, or medics.
- Incorporate Tools, Processes, and Hands-On Projects with Deliverables: Whether your student's toolboxes are metaphorical, technological, or actual toolboxes, allow your students to equip themselves with the tools they would use outside of school to get projects done. Creating an

artificially insular environment will not aid your students for life after school; allow them to use the Internet (with precautions) and give them all of the resources they need to complete their projects well. Focusing on meaningful projects with tangible deliverables—a model of a car, a wellwritten play, a shampoo prototype, whatever your students are interested in for each specific field—will help your students get a sense of what contributing to their future fields will feel like!

• Give your Students Real-Life Problems to Solve: Finally, focusing on solving problems with their newfound skills will help ramify the teaching and give your students a change to learn strategy, rhetoric, and logic as well as their more traditional subjects. In math class, ask your students to slice budgets; in the sciences, ask them to write and defend a proposal to solve a health issue. Incorporating real-world examples, whether fictional or sourced from the news, can help teach your students that the skills they're learning will be directly applicable to their own lives, as well as the lives of others—which will prompt them to pay attention and invest more time and care into learning these all-important skills.

What is Social-Emotional Learning?

One growing trend in K-12 education simply centers around the realization that schools aren't just about grades, standardized tests, or even setting students up for myriad college acceptances and successful, lucrative careers: one aim of education is to prepare students to be empathetic, productive citizens of the world.

Social-Emotional learning, which seeks to help students become kind and wellrounded humans, has been disregarded in years past as unnecessary or 'soft'. However, many teachers are choosing to incorporate elements of Social-Emotional learning in their classrooms today.

What are the core competencies of Social-Emotional Learning?

Just like any other academic program, students and teachers who wish to pursue Social-Emotional Learning can work towards mastery in specific core competencies. These competencies are as follows:

• Self-Awareness: Self-awareness is the learned ability in which a student is able to recognize him or herself with accuracy. This may include being able to gauge their emotions, values, and thoughts, and see with some level of transparency the ways in which they influence their own behavior. Self-assessment is key for progress, so self-awareness is a bedrock of the oft-

lauded 'growth mindset'. This tool can be used to help a student recognize his or her own strengths and, in turn, develop crucial self-confidence.

- Self-Management: With proper self-management, students learn to go beyond perceiving and measuring their thoughts, behaviors, and emotions and find ways to manipulate and regulate them. These skills can go a long way towards helping a student manage stress, impulse control, and motivation. With self-management comes talent in the students' helping him or herself work towards goals in progressive, measured ways. Selfmanagement can help with self-discipline, goal-setting, and organization skills.
- Social Awareness: A student who is socially aware takes on the ability to understand where other people are coming from and what they are going through—which includes understanding with empathy the perspective of those from diverse cultures and backgrounds. A socially aware student appreciates the experiences of others, is likely extremely empathetic, has respect for others, and wishes to contribute to community support and resources.
- *Relationship Skills:* A student who has well-practiced relationship skills is able to establish good relationships with people of diverse interests and backgrounds; moreover, these students are often able to nourish relationships, maintain them, and see them grow. Relationships can be broken down into many groups of practicable skills, including clear communication, good listening, intentional cooperation with others, the ability resist inappropriate pressures from society, the ability to negotiate through conflict, and the ability to ask for help (and offer it) when the situation demands it. Such students are excellent at teamwork.
- *Responsible Decision-Making:* Lastly, students who are good at making responsible decisions exhibit a talent for making constructive choices regarding their behavior. These students learn to prioritize their social interactions and evaluate them based on societal norms, safety concerns, and ethical standards. Learning how to evaluate situations realistically helps students understand that actions have consequences, leading to more intentioned activity overall. These students learn well to identify problems, solve them, analyze situations, and reflect upon their ethical responsibility to their community.

What is Classroom Gamification?

One fun trend which has appealed to both teachers and students is the rise of classroom gamification. Gamification has long been a strategy for getting adults to

stick to projects, as we've seen with incentivized rewards programs for brands. In the classroom, gamification often involves incentivizing or simply making a competition out of work or tasks that otherwise may not seem exciting to students facing them.

Many K-12 students are also very aware of the concept of gamification—simply because they love to play games! Through classroom gamification you can tap into the same motivation that allows young children to want to play the same game, over and over, until they beat the final boss. Let's talk about a few ways to use classroom gamification in your classroom to make learning fun.

How can teachers use the concept of classroom gamification to make getting work done fun?

- Use pre-existing games, adapted for your own use: If you can make an existing game educational, then go for it! Trivia battles, Scrabble, Bingo, games with dice, scavenger hunts, and more—if you tell students that you'll be hosting a game-show style event, it doesn't matter how academic it might sneakily be, they'll get excited. Researching answers online to get to the end of a treasure hunt, using vocabulary words to play Scrabble—the possibilities are endless, and may not take much work from you to implement.
- Turn to online educational platforms for ready-made or easily-adaptable games. Online apps like Quizlet, Quizizz and Kahoot offer multiple-choice trivia games that are easy to present at the front of your class, making for instant competition and trivia showdowns in your classroom. You can choose from thousands of pre-made question banks or import your own from your specific textbooks and content needs.
- *Put together a fun quest for your students to complete:* A quest is nothing more than a mission which has strategically placed objectives. Asking your students to complete directional projects and accomplish milestones such as finding the answers to questions, especially if you offer points and nominal prizes along the way, can be a good way to incentivize learning (especially during an educational slow time, like just before summer or during the holidays).
- *Train your students, then allow them to fight a Boss Battle*. In traditional gaming, the boss represents a particularly tough battle one must fight at the end of a level before moving on through the game. There are many online platforms, such as Classcraft, which allow you to put together tournaments and boss battles. These will appeal to students of all ages—teachers may even want to get in on the fun!

• Allow your students to win badges for accomplishments and milestones in your classroom. Some things never change: Having a public way to celebrate mastery and achievement with tangible prizes and artifacts handed out for milestones act as powerful incentives, even for getting things done which may not be as fun as normal games!

Ultimately: When in doubt, injecting healthy competition or setting a timer are two surefire ways to help K-12 students feel less like their studies are a chore and more like they're a fun way to prove themselves.

Educational Trends: Preparing Students for Modernity

One final group of trends we see goes hand in hand with a classroom expansion technique we discussed earlier in this course. The one thing all students have in common when compared to their educators is that they need to be even more prepared to work with technology seamlessly in their lives because that, increasingly, is where the future is headed.

One educational trend, therefore, is focused on the use of technology within schooling systems for the specific aim of preparing students to use technology when out of school.

Emphasis on 21st-Century Skills

In many cases, teachers are looking to support their students as they will be entering the workforce later in the information age. According to some studies and projections, the core competencies that students will need are:

- *Collaboration:* Being able to work together with peers, students in different grades, and even teachers will set your students up for a lifetime of productive project-producing while working seamlessly with people they may or may not like!
- *Communication:* Good communication skills are the foundation upon which any success is built. Laying that foundation now will set your students up for a lifetime of easier relationships and getting projects completed.
- *Creativity:* Being able to think outside the box will serve your students for years. Additionally, being able to 'create'—whether that creation is a physical product or not—is a useful skill which students can use across a wide gamut of different fields.
- *Critical Thinking:* Self-awareness is built upon a bedrock of critical thinking. Being able to think objectively and critically will help the student

self-evaluate, make good decisions within difficult situations, and be more empathetic to their peers.

- Information, media, and technology literacy: As we continue on in the Information Age, it's important to ensure that students have the comfortability and language to deal with technology which can set them up for future success.
- *Initiative*: Among the skills employers are constantly looking for within talent pools is initiative—the proclivity to realize that it's your job to make change happen. Instilling this in students from a young age will go a long way towards supporting their future success.
- *Flexibility:* Everyone needs to learn how to go with the flow! One benefit of constantly exposing your students to different learning styles is that they learn how to adapt and be flexible to what life throws at them—certainly a pertinent skill in modernity.
- *Leadership:* Giving your students the tools now to be excellent leaders in the future—whether that's initiative, communication skills, creativity, or more—will set them up for a lifetime of success.
- Social Skills: One of the benefits for a student of going to a public or private school (as opposed to home or remote learning) is simply that they become more socialized—a skill necessary for everyone. Knowing innately how to navigate a world of unspoken social mores will serve students for their entire lives.
- **Productivity**: Lastly, simply setting your students up for the expectation that they will get good work done on a timely basis and be expected to contribute regularly will give them experience they will use no matter which field or career they end up pursuing.

Moving, therefore, to learning paradigms and systems which support advancement in these skillsets is key for student happiness and well-being in the future. But aside from life skills and core competencies as we have discussed, are there specific skills that will likely be pertinent in the coming decades which we can teach our students?

What are specific 21st century skills we can focus on teaching our students?

Many 21st century skills tend to fall under the general umbrella of internet and technological literacy. While it might seem like a redundant or frivolous skillset to invest in, there is no doubt that whichever careers our students choose, they will

use advanced technological and internet-based tools to communicate and complete projects. Allowing students to become familiar with and develop expertise within these systems, therefore, is just giving the students one more tool to use when becoming contributing members of society.

- Cloud Computing: Learning to work within the Cloud (and supporting technology literacy in general) is crucial for streamlining productive learning opportunities and supporting future success at work.
- Mobile Learning: Likewise, trends are showing that recourse to ever more remote/mobile work systems and educational paradigms is going to be the MO in future decades. Preparing students for productivity within this workflow by allowing mobile learning when appropriate can help them develop this crucial skillset.
- BYOD, or Bring Your Own Device: A far cry from recent years in which phones and other personal technological devices were not allowed in schoolrooms, this trend invites students to bring their devices in-for education's sake. In many districts in which the one-to-one technology initiatives may not be feasible or supported by the school's infrastructure or finances, schools are learning to embrace the fact that many children have at least one device which they already know how to use.
- Familiarity with Immersive Technologies: Virtual Reality, Augmented Reality, and more—we're now beginning to dig into the surface of a techbased tomorrow, and the more that students are now aware of these possibilities and the basic concepts underlying them, the more equipped they will be to use them when the time comes.
- Greater Digital Security: Hand in hand with all of these technological devices and programs that will be pervasive in the future workforce is the heightened danger of being taken advantage of over the Internet. Teaching students now about basic Internet security is a skill that will follow them through the length of their careers.

Key Concepts

- There are many different cutting-edge educational theories which are just beginning to be discovered and fleshed out. If we're willing to change the ways we have traditionally taught, we stand a better chance of creating a warm, welcoming, engaging and effective classroom atmosphere for our students.
- Delving into these different educational theories will take investment, but it is clear that the benefits will at least match our input.

Reflection Question

Think for a moment about your own education. When did you feel most engaged with your studies? What might this say about the way you learn?

Now, think about your current classroom. Is it set up in a particular way to increase your students' engagement in their studies? Is there anything you could do in order to allow the students more autonomy in their work?

Section Three: Ensuring that Every Student is Able to Succeed Moving Forward

We've discussed the benefits of educational trends relating to the psychology of the students, the philosophy of learning, and the likelihood of more and more integrated technology solutions in future academia and career opportunities. In this final section, we'll turn to the trends of school safety and inclusivity, as there is a strong focus now on ensuring that every student is able to learn safely without fear of physical or verbal danger or abuse.

Lastly, we'll discuss what a few experts have noted are likely the trends to watch over the next few years, as we move further into the Information age.

More Comprehensive Emphasis on Safety

Whether schools are protecting students from physical or mental abuse, it remains a definite responsibility of every school to its students and their families to keep students safe. In the past decade—and moving forward—schools have considerably ramped up their efforts to ensure that each student in their school can reasonably expect a safe experience while on campus. Let's briefly look at why this is the case —and how every teacher can do their part to increase school safety.

Why is it a responsibility of schools to keep students safe?

It's been pointed out from the likes of Maslow to the current U.S. Head of Education that children simply cannot be expected to learn if they are not safe. Yet, with daily threats ranging wildly from bullies to depression to raging hormones even to school shooters and more, students have rarely been less safe at school (or felt less safe, which has a similar impact on educational efficacy).

What are some practical steps that we can take to help keep students safe?

- Foster a sense of inclusivity in your classroom, and be sure to report any evidence of bullying that you see.
- Proactively teach your students about bias, bullying, and ignorance.
- Try your best to ensure that every student in your classroom is as involved in the community as they possibly can be. Isolation and seclusion do not lead to healthy community behaviors.
- Be very supportive of any student (or students) exhibiting risk factors for bullying or other targeted violent behavior.
- Teach civics and social studies in your classroom. If that is not your specialty, teach by example and representation.
- Inspire and encourage your students to be active allies of each other. Building a strong and fully engaged community is the best thing we can do to keep our students and the entire school community safe.

What are ways we can help students practice safety online?

- The next big wave of student-focused safety that we are going to see will be focused on Internet security. The FBI has issued a warning to K-12 schools regarding the exposure, hacking, and even theft of data and identities within school systems due to online activity.
- One of the main things that we can do to help students stay safe, aside from investing on an administrative level in technical Internet security software, is to give them information. It's simultaneously a 21st century skill and a crucial safety habit to teach your students that the Internet is forever, and the Internet is not always fun.
- Repeatedly and frequently reminding students that if they are contacted by anyone whose identity is not immediately and provably apparent they should shut down the conversation is simple and may protect students from irreparable harm.

A Focus on Special Education

Where in years past students who have been earmarked for special education services have been specifically sent out to special education schools or guided into courses differing from those of their peers, it is now the focus for the majority of special education students to be immersed in the same general education classes as much as possible—as the rest of the student body.

In order to make this happen, schools are focusing on equipping special needs students with the tools, technological or otherwise, that they require to help them succeed.

What can schools and teachers do to fix the current shortage of special education teachers?

- While we wait for an influx of the next generation of teachers, many of whom will have received training in special education as part of their degree (as well as the many teachers-to-be who will have chosen specifically to become special education teachers), schools must increase the percentage of their budget and attention towards special education initiatives.
- In the meantime, current teachers should seek out forms of continuing education which certify or educate them to help special needs children as much as they are able.
- Increasing awareness, as much as possible, about the rights to a good education enjoyed by all students especially including those with special needs, and working to integrate special needs students into the common curriculum as possible will help streamline special education, reduce the associated workload on special education teachers, and inspire a new generation of special needs teachers to start on the path towards their own careers.

What are the benefits of an IEP (an Individualized Education Program)?

- An Individualized Education Program, or an IEP, is a program written for a student with special needs after they have been evaluated and deemed as such. This document and plan will outline the steps that are needed to be taken in order to ensure that the student in question receives a fair, stimulating, and effective education.
- As we have seen in previous sections, an IEP for a special needs student does not differ much from where the current K-12 trends in education are already veering for general education students.
- An IEP helps inform the school from an objective standpoint what will be necessary to educate a student. The IEPs received at the beginning of the year (or when the students are enrolled) therefore go a long way toward helping the school allocate resources to support that particular student and his peers.

- The IEP must be managed and updated by parents, teachers, and evaluators over the course of the child's education, which does mandate yearly (or more frequent) check-ins regarding the student's well-being and progress. This allows for more knowledge by everyone in a student's circle of care regarding precisely how the student is doing. As a result, if the student is struggling or if his situation changes, the support team should be able to very quickly alter the plan to accommodate.
- Ultimately, education is rocketing to a place where every student, not only students with learning disabilities, will have something akin to an IEP in place. They allow everyone to stay informed, and they help schools plan for resources needed for each student. Allowing the student to participate in the formation and execution of his IEP is the natural next step, and one we expect to see in the near future.

Tolerance and Inclusion: Expanding the Classroom to Welcome All Students

In order to make schools safer and more productive, a current and ongoing trend in education is the eradication of barriers between socially disparate groups of students. Much as legions of administrators, teachers, and school officials worked tirelessly in decades past to end racial segregation in schools, it is our current job to ease the ramifications of unnecessary social walls which have been built between disagreeing groups of peoples.

To this end, featuring inclusive curricula and school subjects (for example, LGBTQ representation in health coursework) as well as promoting a welcoming, informative, friendly culture at school for all who enroll are both current goals of many within the school systems of the world. As much as we can learn from scholarly textbooks and from the most well-crafted curricula, we're poised best to learn from each other.

How can teachers assist their students to learn best from each other?

- Teachers can best assist their students to learn from each other by providing helpful, fact-based information about the history of ways various communities have been treated unfairly, keeping information presented in class neutral but comprehensive (for example, including LGBTQ-friendly information in health class), and promoting a welcoming atmosphere of friendly disagreement and discussion in their classroom.
- One of the most helpful tools a teacher can give their students is the practice of disagreeing well and entering into arguments with good rhetoric instead of

bullying and verbal abuse. Too often students react to the strange and unknownfor example, another student who may have made different life choices from them or come from another background—with confusion, anger, and insults (or fists). Preparing your students to meet the confusing and unknown with curiosity, excitement, and wonder as well as equipping them with the right mindset for learning more instead of shutting down will not only aid your classroom experiences, it will make them better citizens of the modern world they will be entering.

What are a few practical ways that teachers can make their classrooms more welcoming and inclusive?

- Make your classroom a punishment-free zone (as it makes sense). If students know they can ask you questions without repercussion and explore new territory without being penalized, they will be more naturally likely to reach out to you for information and let you know when they need help.
- No matter what your subject is, find ways to include representation of all the disparate communities which make up the world in your presentations, projects, and other assignments.
- Finally, if there is tension in your classroom, don't ignore it (or put the principal players in a group and passively expect them to befriend each other and work it out). Holding class-wide or school-wide events—for example, a wholehearted participation in Black History Month or in LGBTQ-friendly events—can be a good and positive occasion to help clear up any confusion which might be leading to a negative environment in your classroom.

Does the specific act of welcoming students into your classroom and working to create an inclusive atmosphere assist the aims of general education?

Yes! If we take it that the aims of education are very generally threefold, welcoming students and working towards an inclusive, collaborative environment is an investment in each aim. Schools must aim to keep their students safe, to prepare students for life after school, and help students achieve basic mastery in general education subjects as determined by administrative and governing standards. Fostering a welcoming atmosphere of education will help keep students safe, instill in each student habits that will make them good citizens, and allow them to keep focus on their studies and projects instead of worrying about their basic safety or classroom politics.

Educational Trends to Keep an Eye Out for in the Next Decade

We've discussed several educational trends that are flourishing right now embracing current technological advances, delving into the psychology of how each individual student learns, and finding ways to think beyond the classroom.

If there is one thing which we know for sure, however, it's that we don't currently know all there is to know about how children learn—and that educational psychologists still have a lot of work to do in aiding the evolution of our teaching styles. Therefore, even as we work to update our teaching philosophies based on current data and current trends, we must put ourselves in a creative, expectant mindset and be willing to change with the times.

With this in mind, we've collected a forecast of the likely trends to watch in the years to come.

- Shifts in Assessment: With growing certainty that standardized tests are not the most certain way to measure growth, progress, or even mastery in many subjects, a move towards more creative and holistic methods of ascertaining a student's familiarity with a subject prior to forward progress or the culmination of studies is going to be implemented. Some states are embracing this even now: In the state of Washington, there are now seven approved ways to receive a high school diploma—and not all of them require passing tests along the way.
- Virtual and Remote Laboratories: With the expansion of the classroom and increasing Internet-based technologies, it is expected that soon schools all over the globe will be able to tap-in to high-tech research laboratories to use their resources from afar. While the disciplines of chemistry, physics and biology will be immediately able to utilize this high concept, it is by no means restricted to just the sciences.
- **Professional Development from a Younger Age:** Allowing students to specialize in specific disciplines related to future courses of study and even careers, allowing internship-like experiences from a young age: One of the tenets of education in future years is going to be extreme practicality, allowing students to learn what they want and need even from early years.
- *More Flexibility in School Attendance and Projects:* To allow for families of the future to make decisions for their children as well as with the rising ubiquity of internet-based learning, we expect to see a rise in flexibility of students switching between schools, between academic tracks, and even between inschool and at-home learning. Increasingly, we will be bringing education to the student, rather than the other way around.

Key Concepts

- Students need to be safe in order to learn—yet, with rates of bullying continuing to skyrocket, students do not currently feel safe in school. Focusing on increasing protections for students and discouraging bullying behaviors needs to be a major focus in the coming years.
- The expansion of the classroom is not limited to distance learning and external opportunities; it's also a question of who feels safe and included in our classrooms.
- Education will always be evolving, as education is centered on the student—and we are only learning more each year about how children learn. Therefore, it's best to be prepared for paradigms to change by the year, if not even more frequently than that. Indeed, one metric of a truly student-focused educational environment may be near-constant change in a school's methods of educating their students.

Reflection Question

As we expand the classroom and effect change for the better of our students, think about the ways in which you keep your classroom inclusive and dynamic. Are there ways within your teaching style by which you can better embrace the future?

Summary

Reading, writing, and arithmetic: Teachers were tasked with teaching children three subjects, according to education's anecdotal beginnings, and often had to manage a whole classroom of differently-aged children all by themselves. We have come a long way. Along with greater resources, we now have greater responsibilities—and enhanced opportunities to serve our students.

Psychologists and developmental biologists are learning more each day about how children's brains develop, learn new information, and grow. As teachers, it's up to us to take what they've learned about learning and form new theories of education best suited to expand upon those biological insights. The currently seen trends in K-12 education are the results of our current attempt to do just that.

By taking the time and initiative to delve deep into what makes each individual student tick and then working with science to determine ways to best reach that

student, we are setting the next generation of citizens up for a lifetime of success. It is just that responsibility, though, that gives teachers pride. Being able to teach students far more than just their assigned academic subjects; being able to help form them into the best versions of themselves, the upstanding global citizens of the future—that aim is the goal to which every educational trend, past, present, and future, seeks to achieve.

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