

Creating the 21st Century Classroom:

Empowering Teachers Through Acellus Gold

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The author inside the Old North Church in Boston, MA.

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The author teaches more than 20 Social Studies courses via the Acellus Learning System..

CONCLUSION: GO FOR IT!

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PROLOGUE

The purpose of this book is to explore means with which to bridge the gap between the traditional teacher-led classroom of the past 100 years, and the new 21st century classroom of blended learning using technology. The speed at which technology has advanced in the last two decades has far surpassed the traditional textbook-driven way of learning that has dominated education since the birth of the first one-room schoolhouse.

Since its inception, educational classroom learning has seen the teacher at the front of a classroom instructing students seated in rows. Often, the students are tirelessly attempting to write down notes in an effort to keep up with the pace of the teacher. The curriculum, frequently produced by outside influences, forces educators to go at a pace that is not conducive to proper student advancement. All the while, students who fall behind in concepts, homework, pacing, and learning must fight to catch up while the rest of the classroom moves forward. The pace of the traditional classroom is set by *the teacher, the clock, and the curriculum*.

The teacher has been, and remains, the leader in the educational setting. It is the teacher who gets to know their students on an individual level. Throughout the history of education, the instructors are the ones who truly live in the trenches of learning. They see the day-in, day-out struggles and successes of their students first-hand. Often, the teacher has to wear numerous “hats” in their profession -- instructor, mentor, guardian, inspiration/role model, guide, parent figure, coach, counselor, and caregiver. In today’s educational setting, the role of the teacher remains vital in the success of the student. Now more than ever before, students require educators who inspire and guide them to achieve more than they ever thought possible.

As teachers navigate through the rigors of the expectations of their job, oftentimes *the clock* itself is an obstacle and a burden. Educators must plan their days, weeks, and months of the school year around an incredibly tight schedule of time. From exact minutes of a period, to the exact hours of a day, teachers need to account for each and every second of instruction in order to be able to get through the curriculum by the end of the school year. The history of education has shown that time is of the utmost importance to the teacher in the classroom. With the help of the Acellus learning system, ongoing assignments can now take place outside of the brick-and-mortar classroom walls. Instruction and learning have the ability to travel not only with the educators, but with the students as well.

As time often has dictated the course of instruction for educators of the past, so too has *the curriculum* they must cover. Teachers have been, and will continue to be, bound by a strict set of standards they must follow. These expectations place a huge burden on teachers to be able to prepare students for high-stakes assessments required by their district, their state, educational agencies, and universities. The Acellus educational system allows teachers access to advanced technological capabilities that enhance their ability to not only cover the required materials outlined in the curriculum, but do so in a way that is creative, engaging, instructive, and effective at the same time.

The 21st-century student has been exposed to the newest technology literally since birth. Applications and algorithms are a way of life for the typical student sitting in today's classroom. The need for better technological options was already at the forefront of education *before* the COVID-19 pandemic of 2020. As a result, when the world changed due to the disease, education changed with it.

Overnight, students were sent home to learn on screens with all kinds of apps and programs. Educators, meanwhile, scrambled to recreate their classrooms using technology that was often foreign and brand new. There was little time for proper training or professional development. Teachers, suddenly, were thrust into a world many were not prepared for.

When students returned to the classroom post-COVID, education had changed forever. The availability of online learning created a demand for the classroom to reach beyond the brick-and-mortar walls of traditional schools. Teachers were

faced with new requirements to launch “online classrooms” that many were ill-equipped to prepare. Suddenly, teachers experienced a drastic learning curve in order to make their classrooms 21st century ready. Unfortunately, the results were often hastily prepared platforms that did not properly utilize the technological tools offered to teachers. Educators, in turn, became frustrated with their own lack of knowledge and preparedness to reach the expectations of a 21st century classroom. This book dives into the professional outcomes of teachers being compelled to change their style of teaching to fit the 21st century blended classroom.

In addition to my 30-plus years in a public school classroom, I have been working as a course creator and on-camera teacher with Acellus for over a decade. In that time I have witnessed firsthand the transformative impact of technology in the classroom. The new Acellus Gold Edition represents a paradigm shift in education, setting a new standard in blended learning by combining adaptive technology with robust support for both teachers *and* students. The Acellus system has been designed to empower educators to engage students on a level that goes beyond traditional classroom methods of the past. It enables a highly personalized learning experience that adjusts in real time to what the individual student needs.

Throughout this book, Acellus Gold Edition is used as a touchstone for exploring the emerging directions in education that prioritize interactivity, flexibility, and enhanced support structures. The platform equips educators with the tools to bring the 21st-century classroom to life. The result is a new direction for instruction and learning that benefits both the classroom instructor and the student.

INTRODUCTION

In the past several decades, education has seen a drastic shift away from the “traditional” classroom setup to more online/technology-based formats. As a result, many teachers have become frustrated about their role in the classroom. Additionally, proper training and access to technology have been difficult to come by for many districts across the United States. The challenge facing education today is assisting teachers in the transformation of the school classroom. Empowering educators to not only use technology but to master its ability, will enable teachers to reach students in ways not possible before. The key is proper professional development that allows the teacher to be an active participant, rather than a bystander being told to use a new platform.

Acellus Gold provides an opportunity for teachers to engage in the learning process more than ever before. Educators will now have the power to not only monitor student progress, but also to aid in the continued development of the material itself. This interactive step enables teachers to be a part of an educational team that fosters student learning in real-time. The key is to provide educators with the training, and ongoing support thereafter, needed to create the confidence to move forward with technology into the 21st-century classroom.

Acellus Gold has the ability to create a learning -- and teaching -- environment not seen before in public education. The teacher is empowered as the facilitator of the learning process. No longer will the teacher be the sole instructor who must be the source of all information. Rather, the teacher becomes the intellectual expert who guides the students in performance-based learning. The role of the teacher has never been more important. With a generation (Z) of students who have grown up with technology, the 21st-century classroom can engage learners like never before. Education must bridge the gap between traditional learning from a century ago with the 21st-century skills of today’s learners. At the heart of this

movement are trained teachers who embrace technology-based learning, while still being empowered to change the lives of the students they impact each and every day.

The purpose of this book is to look at the way the classroom is about to change, and what the newly defined role of the teacher will be in this new, adaptive learning environment. The 21st-century classroom incorporates technology like never before. Preparing teachers to not only utilize the technology but maximize its use, is paramount in moving the needle of effective teaching forward. The Acellus Gold platform not only encompasses the ability to launch teachers into a new world of instruction, but it also provides the support, training, materials, feedback, and data to empower educators to aid students in ways not possible before.

Through professional development with the Acellus team, educators learn how to use the technological tools provided by the system. In turn, those tools allow teachers to gain command over the way the students learn both inside and outside their traditional classroom setting. The result is the creation of the 21st-century classroom and the 21st-century teacher. Students, teachers, school systems, and the education profession itself grow together by utilizing the tools that Acellus Gold has to offer.

This book will examine three factors that create the 21st-century classroom. First, is the examination of the *Impact of Teachers*. What makes a great teacher? What role do Master Teachers have in the lives of their students? The kids still need rock stars in the classroom. Second, the *Science of Learning* will dive into the aspects of the Acellus Gold learning system. We will look into exactly how the tools of Acellus technology have changed and enabled teachers to do more than ever before in education. Finally, we will bring it all together with the *Art of Teaching* to truly create the 21st-century classroom -- a world where students can achieve at levels never thought possible, while teachers can provide individual support like never before.

Chapter 1:

THE IMPACT OF TEACHERS

“Teachers are those who help find strengths, wipe away tears, overpower demons, and conquer fears.” -- unknown

There is no greater honor and duty in the world than to help a child not only fulfill their potential but reach beyond it. Simply put, teachers change the world. The field of education is not a profession one enters as a way to pass the time and collect a paycheck.

- Teachers have a passion for helping kids grow.
- Teachers find joy in watching children gain knowledge.
- Teachers freely give their time beyond the classroom to innovate, create, empower, and inspire the next generation to change the world.
- Teachers make a difference each day in the lives of their students.

No other profession has such an awesome responsibility of showing children what is possible. No other profession opens doors of opportunity to students who grew up believing they were shut. No other profession looks into a child’s eyes and says “yes you can” to their dreams. Being a teacher is the most awesome job in the world!

1.1: Remember Your “Why”

“What do you want to be when you grow up?”

This question is asked of practically every student at some point during their childhood. From an early age, we are all asked to decide the path we will take with the rest of our lives. Thus, in childhood we begin the journey in search of a profession that not only meets our skill set but also gives us purpose -- fills the yearning for a

place in the world where one fits in -- the perfect profession where one's abilities are not only appreciated and valued, but are impactful. Often, those who decide on the education field experience the yearning to help others grow and reach their full potential.

Teachers are a unique breed of professionals. It takes a special type of person to inspire children on a daily basis. While teachers must go to college to earn a degree and prepare themselves for the classroom, the reality is the passion educators have for kids is not something that is taught or learned. Teachers have an inner passion to help students grow. Seeing the look in a child's eyes when they "get it" for the first time -- when learning has taken place -- is the fuel that drives the passion that is teaching.

The real question for those who enter the teaching profession is this: What is your "Why?"

Let's expand on this question:

- What reasons did you have for wanting to become a teacher?
- When did the passion start?
- What caused it to blossom inside you?
- What drives your "want to" in helping students?
- What vision do you have for the future of the students you impact?

The answers to these questions are what drive all educators to get up every day and enter the classroom. Without the "why," teaching turns into just another job. Without the "why," there is no impact on the lives of the young faces looking up at you in the classroom. Without the "why," the magic simply does not take place.

The Author's "Why"

My passion for teaching began at a very early age. When I was just eight years old, my family went to The Henry Ford Museum in Dearborn, Michigan. The museum is filled with hands-on displays and artifacts from countless eras in American history. Adjacent to the museum is Greenfield Village, where historical buildings, such as Thomas Edison's laboratory and the Wright Brothers' bicycle shop (where the first airplane was created), are all within walking distance of each other. It is truly a place where the past comes to life.

It was one particular display in the museum that caught my young attention – the actual chair in which President Abraham Lincoln was sitting on the night of his assassination at Ford’s Theatre on April 14, 1865. When I saw the chair, along with Lincoln’s blood stains, I simply froze. My eight-year-old self suddenly came to the realization that Lincoln was a real person, not a cartoon or painting of a man in a top hat. He was a real human being who actually lived, and died, for the country (see Figure 1.1). In an instant, Lincoln came alive for me – and I had to tell the world!

I went home and began to “teach” my stuffed animals all about history. My “students” were my passion as I found story after story to explain to them. At eight years old, a passion was awakened inside of me that has never left. I had found my “why.” As I grew older, the yearning to teach became stronger and stronger. I might not have known it at the age of eight, but as time passed, it became undeniable -- I was going to be a teacher who made history come to life in the classroom. I was going to share with my students the emotions of the people who lived throughout time. I was going to create a learning atmosphere like never before!

A few years later, when I walked into my seventh-grade social studies classroom, my passion found a source of inspiration. Mr. Robert Hall was an educator full of energy, knowledge, and vigor. Students couldn’t help but be drawn into his tales of danger, adventure, courage, and celebration. I was captivated from day one -- I had found the person who shared my vision for making the past come to life! Mr. Hall inspired me even further to pursue my dream of having my own role in helping kids grow and learn in new and exciting ways. My classroom was going to be an awesome place of adventure, passion, and storytelling! There simply was no stopping my destiny to be an educator.

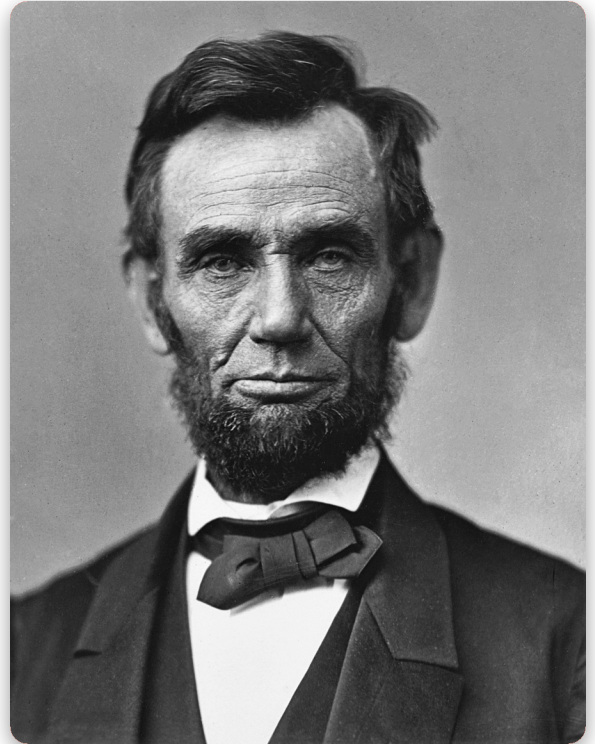


Figure 1.1: Many teachers clearly remember the moment when their passion for teaching was ignited, as when the Author’s love of history was awakened by his exposure to physical evidence that President Abraham Lincoln was a real person. [Photo taken 59 days before Lee surrendered, 69 days before Mr. Lincoln’s death – by A. Gardner. Library of Congress, Public domain, via Wikimedia Commons.]

What is YOUR “Why?”

While not everyone finds their professional calling at the age of eight, those who decide to enter education often had a profound moment in their childhood that changed the course of their life. Think back to the reason you were drawn to education. It could be a specific subject that you enjoyed while in school. Maybe it was a book you read or a poem that struck a chord. Perhaps it was that one special teacher who made you feel like you could do anything you set your mind to. THAT is your “why.”

The education profession is an ever-changing endeavor. New methods, structures, mandates, and technologies are introduced on a consistent basis. Teachers are asked to stretch, adapt, and change as the years go by. In moments of frustration or stress, teachers need to go back to their original “why.” They need to stop, breathe, and remember the reason they got into education in the first place. They need to tap into the passion that called them to such a noble profession. If they can remember their “why,” the energy will come roaring back and empower them to continue to change the world – one child at a time.

So this is the question: What is your “why?”

1.2: Connection to YOUR Kids

“(Kids) don’t remember what you try to teach them. They remember what you are.” -- Jim Henson

Take a moment and think back to *that* teacher who inspired you, who literally changed your life. Put yourself back into that classroom as a student. Think about the way *that* teacher made you feel when you walked in the door. Think about how *that* teacher supported you on your difficult days. Think about how *that* teacher celebrated your victories with you and made you feel like you were the best kid in the world. Think about the lasting impact *that* teacher had on your *self-confidence*, your *learning*, and your *life* (see Figure 1.2).



Figure 1.2: Although Helen Keller (left) was blind, deaf, and mute, her teacher, Anne Sullivan (right) was able to connect with her and teach her to communicate using the manual alphabet. [Image from Popular Science Monthly Volume 63, Public domain, via Wikimedia Commons.]

Teaching is about connecting with kids -- period. The heart of what teachers do is to encourage students when no one else does. The job of a teacher is to not only know their students but also to support them in a way that inspires them to reach beyond their potential and dream about the possibilities their futures hold.

One of the paramount duties of an educator is getting to know the students they see every day in the classroom. During the course of a school year, teachers are oftentimes the one constant adult in a child's life. Think about it; on average students spend a minimum of forty hours a week in school -- that is the equivalent of a full-time job! As a result, teachers are the ones who more often than not understand the joys and heartaches their kids face throughout the year. It is the teacher in the classroom who is aware of not only the educational makeup of the child but the emotional makeup as well.

The question then becomes, just how does a teacher gain the knowledge needed to best serve the students they teach every day? The answer -- *It begins on day one.* When students walk through the door on the first day of school they are filled with all sorts of emotions. From pure joy to knee-buckling fear, kids of all ages enter the school year facing the unknown. It is the teacher who sets the pace and directs the emotions from the start.

Master Teachers understand that the heart of being an excellent educator is understanding where their kids are coming from at the start of the school year -- both emotionally and intellectually. Often, data is available from prior years -- but does that truly tell you who this person sitting in front of you today actually is? It is paramount that teachers take time at the beginning of the year to engage each student on a personal level.

The first, and sometimes most common, aspect of gaining knowledge about the student's educational background is through the concept of "practice testing." It is commonplace in education to give what are called "practice tests" to assess students on an educational learning level at the beginning of the year. These tests can often give a window into what information has been retained from previous learning, as well as any knowledge that may exist going forward with new material.

While practice tests can certainly give an educational snapshot for the teacher, they hardly tell the entire makeup of the student. As a result, practice tests should

be treated as such -- practice. They need to be low-stakes assessments where the student is doing their best and not feeling beat down by impossible questions they do not understand or know the answer to. After all, the goal is to gain insight -- not start the year, or course, by making students feel inferior or uneducated. Caution needs to be taken with practice testing to be sure that long-lasting damage is not done to the student psyche. As we will see later in Chapter 2 of this book (*The Science of Learning*), Acellus Gold aids teachers in gaining valuable educational knowledge without the risk of making students feel as if they have “failed” during an assessment. The educational component of getting to know your students is but one of the many important features of being an educator. However, it takes a back seat to the most important part of the equation -- getting to know WHO your students are.

Master Teachers take an interest in the lives of their students. They take the time to notice what their kids are passionate about both inside and outside the classroom. This can be done in a variety of ways, from individual surveys to attending sporting events and activities outside normal school hours. This invaluable knowledge gained by the teacher allows them to not only reach students on a much more personable level but also to show the kids how much they care about them outside of grades and assignments.

Survey Example

One example of gaining insight into the interests of students is a simple survey at the start of the school year. Have the students answer a series of simple questions that are both open-ended and specific.

For instance:

1. Tell me three interesting facts about yourself that I would not know by simply looking at you.

This question is open-ended enough that the student can direct just what information they want to share. You can eliminate unwanted answers by stating things like “do not tell me your favorite color.” As a result, the student feels empowered to offer items of information they may be proud about -- or offer insight into their home issues as well. The answer the student gives offers the teacher a small window into the person who is coming into their classroom.

2. If you could visit any place in the world, where would you go? Why?

Again, this question is open-ended. Students can literally pick any place in the world, from a foreign nation to a local landmark (see Figure 1.3). Like with the first question, you can get more specific if needed. The teacher could require the student to provide an interesting historical fact about the location - or even make it into a mini presentation.



Figure 1.3: From the Grand Canyon (above), to the Leaning Tower of Pisa, students' dreams can span the globe. These dreams can help you get to know your students. [Image by Pescaio, Public domain, via Wikimedia Commons.]

A survey such as the one above can be done either electronically or on paper. The most important aspect is getting the students to share something about themselves that can serve as a launching point for getting to know who they are as kids. Trust can only be developed between the teacher and the student when both parties get to know one another.

Likewise, the teacher must also share some personal (not too personal; professionalism must be paramount) information about themselves with the class as well. Hobbies, sports teams, books that have been read, educational background, and happy childhood memories all are ways teachers can give a window into their own lives with the students they teach. Trust is a two-way street. Students need to know that their teachers are real people too. The end result is the building of a long-term educational relationship that will foster student growth and success.

The key is to begin the process on the first day of school. Master Teachers show the kids right away that they are passionate about their education. The classroom is a welcoming place where students are allowed to inquire about learning and embrace new ideas and challenges. Your classroom should be one where the students can't wait to go home and tell their families all about their day -- and can't wait to come back tomorrow!

1.3: Setting Expectations in the Classroom

“You get what you expect, or you get what you accept.” -- Larry Kisabeth, Principal

The above statement was spoken to me early in my career by my friend, mentor, and former principal Larry Kisabeth. The two of us were talking about classroom routines and making sure that early on during the school year the students were clear as to what exactly the expectations were. When Larry first said it, I admit that I had to slow it down and think about the statement. “You get what you *EXPECT*, or you get what you *ACCEPT*.” Once I did, it changed my teaching philosophy forever.

Master Teachers know that class parameters must be put in place in order for success to follow. Rules and regulations are a part of making sure everyone is on the same page and moving in the same direction. Expectations, however, go above and beyond simple procedures in a classroom.

Expectations are what push students to their full potential. Teachers who expect the best out of their students -- effort, attitude, teamwork -- set their classrooms, and their students, up for success on day one. This is a vital role teachers play in the education process. Teachers have to be the ones who believe when the students do not. Teachers must set the expectation that students can, and will, achieve their goals with hard work and dedication.

Consider statements such as the following:

- I expect your best effort.
- I expect your energy and enthusiasm.
- I expect a mind that is open to new ideas.
- I expect you to not only pass the course but to thrive!
- I expect you to respect others and yourself.
- I expect you to achieve your goals for this school year.

Now, imagine if we change the word “expect” to “accept.” It is amazing what it begins to do with the statements:

- I will accept whatever effort you give.
- I will accept the energy you decide to give to the class.
- I will accept the fact you do not want to learn about new ideas.

- I will accept that you do not want to pass the course.
- I will accept that you do not respect others or yourself.
- I will accept that you do not have any goals you want to achieve this year.

After reading the above “accept” statements, hopefully, you are saying to yourself “no way would I agree to that!” Teachers need to purposefully set high expectations for their students, and honestly for themselves, at the start of the school year (see Figure 1.4). It is imperative that it happens from day one -- and is consistent throughout the course.

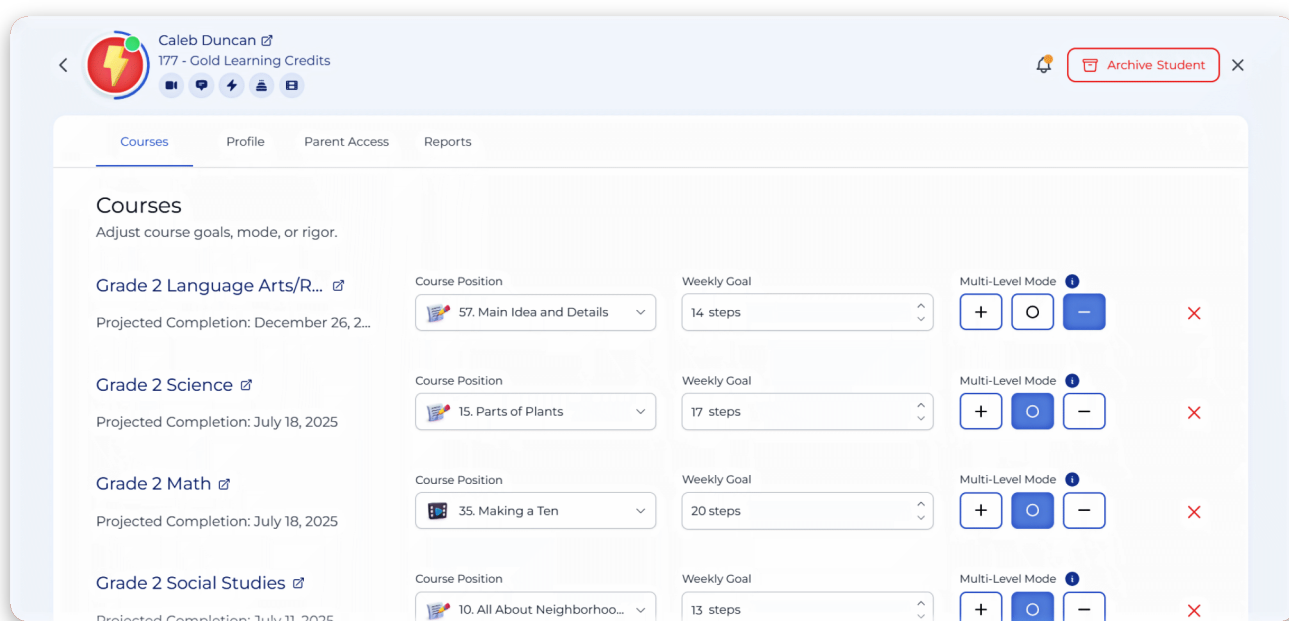


Figure 1.4: One way teachers can set expectations is by setting students' goals in the Acellus Gold system. This is done in the student's Account (example shown here). Goals can be adjusted at any time, as needed, to give the student the appropriate experience.

Once again, think back to the teacher in your life who set high expectations in the classroom. More than likely, this teacher was “hard” or taught a “difficult subject” due to the nature of what was expected from the students daily. While the teacher may have been seen as “tough,” the classroom itself was full of learning, analysis, deep discussion, and success.

Teachers who set expectations high do not do so to stress out their students. Instead, they require effort that pushes students out of their comfort zone into new levels of education not experienced before. Expectations create an atmos-

phere and culture of achievement in the classroom. Students begin to tackle difficult subjects and assignments with the belief that they can, and *will*, find success. Master Teachers understand this concept and use expectations to set the tone for learning and effort in their classrooms.

The key is that the teacher must set the tone of expectations from day one. Students must understand the level of accomplishment that the teacher believes they can achieve. This does not mean, however, that all students should have the same expectations. Students learn at different levels and paces (which will be discussed later in *Chapter 2: The Science of Learning*). As a result, expectations can be both at a classroom level and an individual level. The most important aspect is that one way or another, the teacher must communicate expectations early and often. The students may not believe it on the first day of school, but as it becomes part of the fabric of the classroom, it begins to change the way the students think about learning -- and their own abilities.

The bottom line is teacher expectations set the tone. Your belief in what your students can accomplish often changes the trajectory of the education process. For some students, all it takes is one teacher who gives the structure of expectations that enables them to alter their success. Teacher expectations can be just that powerful.

You get what you *EXPECT*, or you get what you *ACCEPT*.

1.4: Accountability

“Nine-tenths of education is encouragement.” -- Anatole France

Think back once again to *that* teacher that inspired you and changed your life. Take a moment to write down (even mentally) what knowledge, values, and emotions that particular teacher brought into the classroom on a daily basis. What was it about *that* teacher that had such an impact? Was it that they were so easy -- or was it that they had a high level of accountability and enthusiasm that automatically rubbed off on everyone around them?

Great teachers do more than simply present information that must be learned. Great teachers hold their students to a higher level of accountability. They expect the best from their kids -- because they can see the best within them. At times,

these teachers can be called “tough” or “hard” by students. However, when the year ends, the students realize they have reached above and beyond what they thought was possible – not just in the subject area, but in the life lessons they will take with them long after they leave the classroom.

Master Teachers understand that accountability must be present in learning. Students need direction and structure when it comes to understanding the expectations that have been placed upon them for their learning. Great teachers know that they must set the tone with the students from the very beginning – and then also have the dedication to consistently follow-up and encourage that accountability regularly.

One main example of accountability comes in the form of due dates for assignments. Master Teachers expect to get work completed on time – thus always moving the learning process forward and growing the students at the same time. Great teachers stay on top of students with encouragement and support that empowers them to keep going when times get tough.

As 21st-century technology continues to rapidly change education, the ability of teachers to monitor, support, and encourage student success has never been more accessible. The ability for one-on-one interaction and support through technology not only improves the student’s ability to complete assignments but also enables the teacher to have access to specific data outlining the areas in which the child needs the most assistance. The result is a classroom of accountability simply not seen before in education.

As we will see in the next two chapters of this book, the Acellus Gold format not only allows students the ability to enhance their education but also enables teachers to have a first-hand account of the success of each child. The teacher is able, via the Acellus learning platform, to monitor student achievement while also communicating instantly with individual students, offering support and encouragement that keeps the student moving forward. The ability to hold students accountable has never been more of a reality for teachers to use in the classroom.

Accountability begins with the teacher. Educators must each have the dedication to their students to do what is necessary and needed to ensure they get the very best out of each child. They must invest time in finding new ways to monitor stu-

dent progress throughout the school year. As we will see in the coming pages, the Acellus Gold platform works in unison with the educator to transform accountability in a way that fosters teamwork with all aspects of the education community. In the end, the teachers, students, and parents are all on the same page with the learning that is taking place.

Master teachers hold students accountable through the support they give them on a regular basis. Setting realistic and achievable expectations while offering continued support is the key to a successful learning atmosphere. When everyone is held accountable, including the educator, a system of support, goal-setting, and achievement is created.

1.5: Teachers as Lifelong Learners

“The influence of teachers extends beyond the classroom, well into the future.”

-- F. Sionil Jose

Teachers are a unique breed of individuals. For many educators, there is an inner desire to gain more and more knowledge over time. Being able to see the newest trends, ideas, and theories on virtually any subject is something that lifelong learners do regularly. Literally, the learning never stops.

Master Teachers understand that information gathering is not only a useful endeavor but a necessary one as well. There is a saying that goes, “You either get better, or you get worse. You don’t stay the same.” When it comes to the teaching profession, educators who research new, innovative ways to reach their students are at the cutting edge of bringing new energy to the classroom. This can be, at times, a scary undertaking -- as technology tends to move at light speed. Once one platform has been adopted into the classroom, a newer version is released -- creating the need for more learning on the part of the teacher.

Being a lifetime learner, however, embraces the concept of constant change. Great teachers understand that they must be on the lookout for the newest, best, and most innovative strategies to push the learning in their classroom forward. The responsibility of educators to provide the best possible learning environment demands that teachers stay up to date with the newest models and ideas (see Figure 1.5). Not only does it create an awesome atmosphere for the students, but it does so for the teachers as well. The educator becomes the facilitator of cutting-

edge methods that transform the classroom into an arena of creativity, diversification, inclusion, and success.

The impact of 21st-century technology (Acellus Gold) on education cannot be ignored or denied. Students, literally having grown up with screens of all kinds, enter classrooms ready to be hands-on with their learning. The creation of digital education platforms has launched creativity and analysis to new heights, engaging them more in their own learning than at any other point in the history of education.

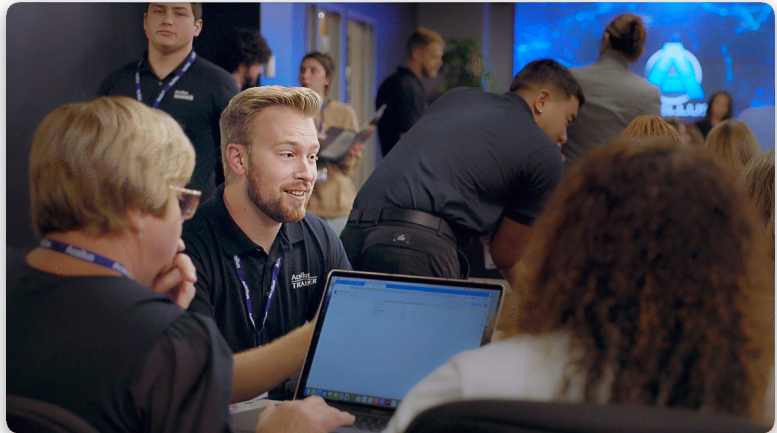


Figure 1.5: Acellus Teachers have multiple opportunities to learn how to optimize their Acellus classroom. Here, teachers have gathered in Kansas City, Missouri to be trained. Additionally, trainers can travel to schools to train the faculty, and teachers have a third option – to complete tutorials within the Acellus Gold Teacher Interface.

A study conducted in 2023 by the EdWeek Research Center showed that 61% of students felt “invigorated” by the use of educational technology in their learning.¹ The empowerment students feel about taking control of their learning is invigorating for the education profession as a whole. Great teachers are always in constant search of ways to engage students in a way that makes them not only responsible but also equal participants in their own education. 21st-century technology, as found with Acellus Gold, has enabled the merger of student participation with teacher interaction.

As lifelong learners, educators play a crucial role in harnessing the power of learning tools that create an atmosphere where students are allowed to have ownership over their education. Master Teachers understand that they must stay on the cutting edge of new techniques and styles that blend learning with student interaction. In doing so, not only do the educators continue their lifelong learning process, but they demonstrate that skill to their students as well. In the end, everyone involved in a classroom of innovation turns into a lifelong learner.

¹ Arianna Prothero, “How Educators Feel About the Impact of Technology, in Charts,” EducationWeek, March 27, 2023. <https://www.edweek.org/technology/how-educators-feel-about-the-impact-of-technology-in-charts/2023/03>

1.6 The Rock Star Mentality

“Teacher”? I prefer “Educational Rock Star”!

When children are growing up, oftentimes they dream of becoming some kind of star. Maybe they want to make movies in Hollywood. Perhaps it is becoming a singing sensation worldwide. In the 21st century, there is the prospect of becoming an “influencer” on social media. From the time we are young, we dream of the days when we will do something big that changes the world.

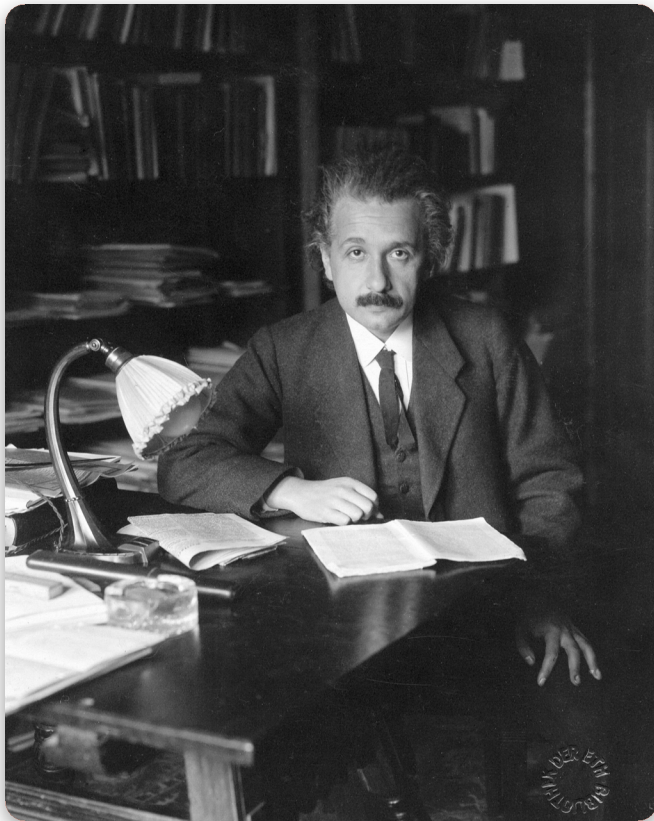


Figure 1.6: Albert Einstein, a teacher himself, said “It is the supreme art of the teacher to awaken joy in creative expression and knowledge.”² [Unknown photographer, Public domain, via Wikimedia Commons]

Teachers enter their classrooms every day with the task of “changing the world” – one child at a time. Teachers look into the eyes of their students and attempt to foster inspiration, creativity, analysis, comprehension, and confidence (see Figure 1.6). Teachers create a learning atmosphere that enables students to reach beyond their comfort zones and take educational risks that will help them grow. It all begins with the teacher.

Master teachers embrace the concept of changing lives. The task of tackling difficult concepts and issues in the classroom inspires them to be at their best for their kids. They plan their lessons and instruction with passion and a desire to simply create the greatest learning atmosphere possible. They leave no stone unturned in the pursuit of creating an awesome classroom.

The “Rock Star” mentality of teachers is an attitude great teachers possess. We have all been in classrooms that simply are a wonder to see. Picture that classroom in your mind right now:

² Jerry Meyer and John P. Holmes, compilers, *Bite-Size Einstein: Quotations on Just About Everything from the Greatest Mind of the Twentieth Century*, (St. Martin's Press, 2003), p.52.

There are students who are engaged directly in the lesson for the day.

They are actively participating in the learning process by helping one another with the tasks placed before them.

There is an energy in the classroom that is contagious.

Students are researching, investigating, and drawing conclusions while assisting each other in doing so.

All the while, at the center of “organized chaos” is the teacher.

The teacher is not only directing the activities but is an active participant as well.

As if directing an orchestra, the teacher leads an atmosphere of learning that is full of energy, passion, and direction.

There are smiles on the faces of both the students and the teacher.

Everyone is having a great time LEARNING.

Can you picture that classroom? Can you feel the excitement that surrounds the learning? Can you see the cooperation of the students in the educational process? Can you see the smiles on the faces of the students AND the teacher? What you are witnessing is the “Rock Star” mentality of awesome educators.

No matter what era of education is being discussed, Rock Star teachers have inspired their students to reach past what they believed their limitations to be. Rock Star teachers possess the drive to always improve their teaching ability by researching exciting new methods of instruction that will enable all of their students to succeed. Rock Star teachers have a constant eye out for the next best way to turn their classroom into an educational lab where all students, regardless of background or ability level, can be a part of their own successes. Rock Star classrooms create Rock Star students.

The Rock Star mentality is one of success. Teachers who strive each day to find the best way to ensure student growth are those who are at the forefront of the edu-

cational world. The goal of teachers has been, and will always be, to do what is best for their kids. As the technology associated with education continues to evolve, great teachers understand what is needed to create a 21st-century classroom that allows students to gain knowledge in ways simply not possible before.

Great teachers understand how to get the most out of their students. The passion that is a part of their instructional process is undeniable. You feel it the moment you step into their classrooms. They are *Rock Stars*!

How do you become a Rock Star? You begin by remembering the “why” of your journey to become a teacher. You think about the reason you entered the educational profession in the first place. You explore the ways you connect with your kids and the feeling of pure joy you feel when the light bulb of learning goes on in the eyes of the students. You yearn for the ability to change the lives of your students -- to change the world in the process. You realize that YOU are living your dream -- the dream you first experienced when that spark to become a teacher lit a fire inside you that could not be quenched (see Figure 1.7).

You have become a great teacher. You have become a *Rock Star*!



Figure 1.7: Living your dream – changing the world, one student at a time – you are a Rock Star!

Chapter 2:

THE SCIENCE OF LEARNING WITH ACELLUS GOLD

2.1: The Concept of Blended Learning

According to the Cambridge Advanced Learner's Dictionary, blended learning is described as “a way of learning that combines traditional classroom lessons that use computer technology and may be given over the internet.”³ (See Figure 2.1.)

For many educators, this concept is not a new phenomenon. The idea of incorporating different methods of instruction has been around since the beginning of the education profession.

A century ago, blended learning would have resembled using new “technology” such as workbooks or even electric lights (see Figure 2.2). Schools began to use individual classrooms instead of one-room schoolhouses. Technology allowed for textbooks on various subjects to be printed and read by students. Education



Figure 2.1: Blended learning can involve traditional methods such as workbooks along with online lessons such as those presented in the Acellus Gold system.

³ Colin McIntosh, *Cambridge Advanced Learner's Dictionary*, Fourth Edition (Cambridge: Cambridge University Press, 2013), quoted in “blended learning,” *Cambridge Dictionary +Plus*, <https://dictionary.cambridge.org/us/dictionary/english/blended-learning>, accessed December 27, 2024.



Figure 2.2: A century ago, workbooks and electric lights were new technologies that were added to teachers' lectures for "blended learning." (This depiction was generated with AI.)

began to incorporate the "Three R's" of reading, writing, and arithmetic. High schools began to offer courses on industrial arts for students who wished to obtain a factory job after their schooling was complete. Businesses began to ask schools to teach certain skills that would produce young workers who could step right into positions on the assembly line without much training.

In a way, the education of students has never changed. The purpose of school is to prepare young people to be ready to face the many challenges the

world throws their way. A proper high school graduate will go out into their community and be a responsible citizen, employee, and person. It is a comforting thought to educators to understand that the role of "teaching" has always been steady, constant, and powerful.

The 21st-century classroom, when compared to a century ago, is still faced with the same blended learning challenges. How do educators move the students forward and properly prepare them for the world they will encounter after high school? Instead of textbooks being the new wave of technology, it is now computer-based, online, data-interpreting software and applications. Teachers are being required to incorporate new learning tools into the process of preparing kids the best way they can for what lies ahead in their futures -- all the while making sure curriculum standards are covered and students have the knowledge they need.

21st Century Learning

Technology tools today offer a unique way of empowering the teacher to still have an active role in the learning process, while also offering a change of pace for students to engage in different activities that tap into all styles of learning. The use of teacher-led instruction, combined with outside resources, enables students to grasp concepts in such a way that many modes of instruction can be used, while moving the learning needle forward, at the same time. 21st-century technology has brought an entirely new wave of opportunities for teachers to engage students in ways not possible before.

Studies have found that access to technology has drastically changed school systems in the 21st century. In 1994, only 35% of public schools in the United States had access to technology. By 2001 it was up to 80%, and by 2014 it was 99%⁴. What does that mean? It simply means that educators in the 21st century need to not only use technology to enhance learning but, more importantly, must understand, grasp, and utilize it to streamline their classrooms to incorporate the skills students will need going forward (see Figure 2.3).

The Acellus Gold system is specifically designed to place learning directly in the hands of the students themselves. The system enables the student to take charge of their learning by going at a pace that suits them the best. As educators understand, students learn in vastly different ways. Acellus Gold allows the student to slow down or speed up when needed – while the teacher regulates their success and monitors possible ways to improve learning.

Public Schools With Access To Technology

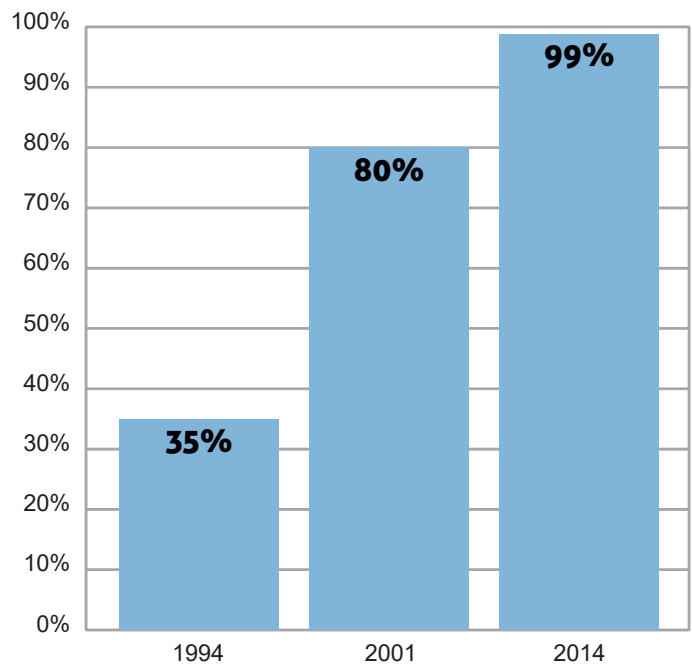


Figure 2.3: Because technology has become ubiquitous in today's public schools, 21st century educators must not only develop technology skills and acumen, but must teach them to their students, as well.

⁴ Pauline Baba, "Technology in the Classroom: a Tool or a Drag?" Journal of Education and Practice 5, 27 (2014):75-78, <https://www.iiste.org/Journals/index.php/JEP/article/view/15969/16308>.

A big help to both the teacher and the student are the Acellus technologies; “Deficiency Diagnostics” and “Vectored Instruction”. Both tools are built into the Acellus learning system to respond to the specific misconception with targeted instruction at the specific magnitude and depth required to remedy the knowledge deficit. As we will see later in this chapter (*and also in Chapter 3*), Deficiency Diagnostics analyzes student responses to determine when a student is not grasping a concept. Once the student shows a lack of understanding, the teacher is alerted to the learning deficit and Vectored Instruction delivers the precise instruction needed to remedy the misconception - whether a targeted response to a specific misconception is warranted or a deeper intervention is needed to reconstruct prerequisite knowledge. The system incorporates the needed lessons into the course format for that individual student. Once the concept is mastered, the student then immediately picks up where they left off in their course of study.

Vectored Instruction allows the student to pause in their course progression where they are currently struggling and re-learn concepts that might have been lost in the shuffle of other courses. The Acellus system blends the learning into the student’s current course lessons in a way that simply allows the student to master a missed concept and then move forward. In a traditional classroom setting, it is often almost impossible for teachers to slow down the entire class to re-teach a concept that one or two students are not grasping. Either the student falls further behind, or the teacher must set up one-on-one tutoring to catch the student up with the rest of the class. With Vectored Instruction, the Acellus Learning System has bridged the gap for both the teacher and the student to keep everyone moving forward together.

Another added benefit of Vectored Instruction is with the educator. Instead of spending hours working through data, questions, and results in an attempt to find the one lost concept for a few students, the Acellus system does the work for the teacher automatically when it senses an issue. Instead of days, or even weeks, elapsing between finding out what the missing link of information is (and then implementing means to catch the student back up to speed), the Acellus system acts right away and enables the educator to use their time more effectively in the larger classroom setting -- all the while knowing that the students who are not grasping a certain concept, are getting the help they need (see Figure 2.4).

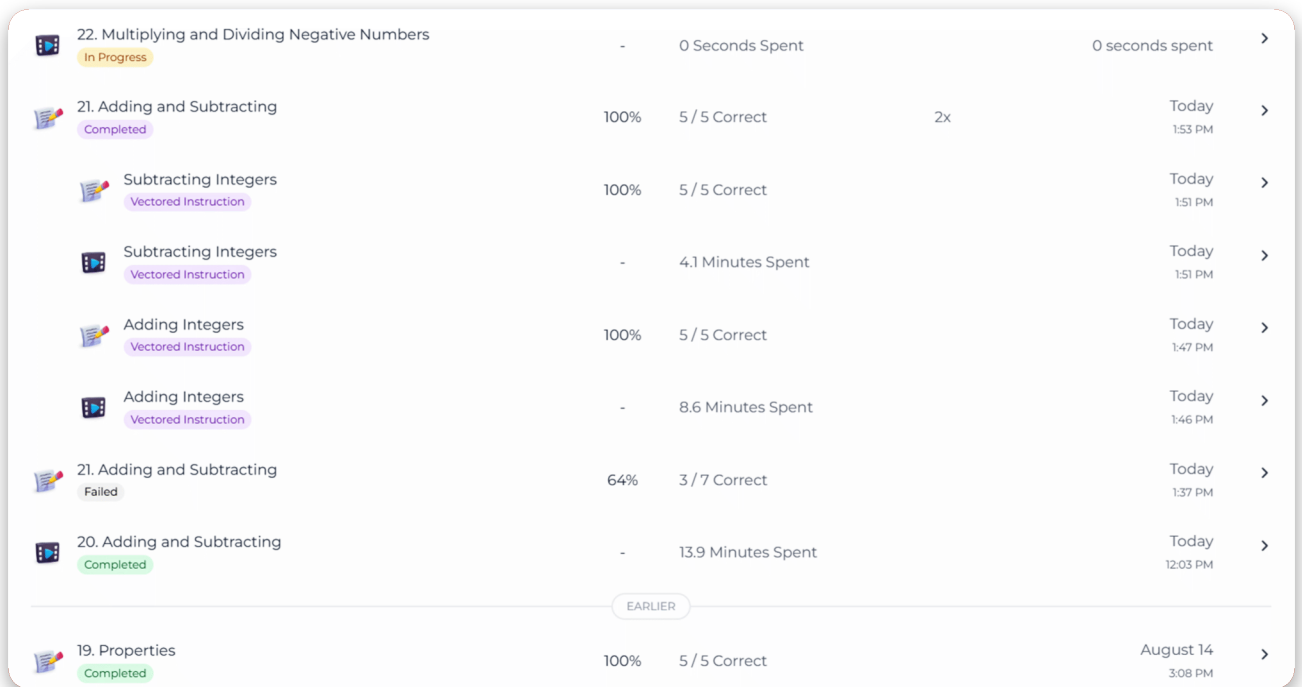


Figure 2.4: In this real-life example, we can see that the student did well on step 19 -- Properties, but was not able to grasp the concept presented in steps 20 and 21 -- Adding and Subtracting. Using Vectored Instruction, Acellus Gold presented the needed background material from a lower-grade-level course. After receiving this intervention, the student passed step 21 with a perfect score.

Benefits to the Classroom Teacher

Throughout the history of education, there has been one constant for classroom teachers -- the need for more time. Be it fitting in the required curriculum before standardized testing occurs or simply wanting to do a special project with the students and realizing there isn't enough time during the school year to squeeze it in, time has always been at the forefront -- and often the biggest challenge -- of planning out instruction.

The Acellus Gold system is designed to help solve the issue of time for educators. The endless hours of grading, collecting data, organizing results, and re-teaching lost concepts are all addressed. The Live Monitor (see Figure 2.5), which will be covered later in this chapter, allows the classroom teacher to keep tabs on how students are grasping concepts, moving forward, and gaining the knowledge they need while preparing for activities in the larger classroom setting.

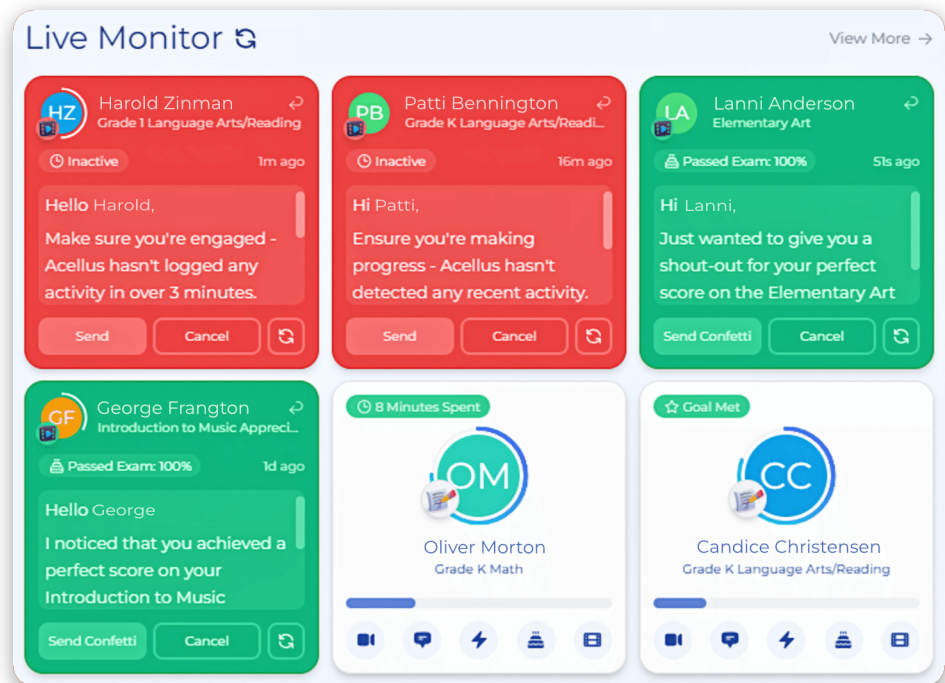


Figure 2.5: The Live Monitor displays up-to-the-minute information about what all students are doing in Acellus. Red-flagged cards indicate a student needing help. Green indicates an opportunity for positive reinforcement. Additionally, yellow-flagged cards indicate a student who, while not stopped, may need help.

The Acellus system automatically grades assignments -- enabling the student and teacher to immediately understand what has been learned, grasped, and mastered. The teacher can monitor the entire class as well as individual students in real-time. This not only allows for instant feedback by the classroom teacher, but it also frees up valuable time that would have been spent on grading papers and instead places it back into enabling educators to bridge the gap in the classroom for more hands-on learning activities and projects. Additionally, the teachers are able to identify what students are in need of immediate assistance, via the Live Monitor, and give one-on-one attention to those who may be stuck or struggling with a specific concept or problem.

Acellus Gold frees up teachers to do more with the students than ever before. By monitoring their learning, teachers can incorporate Special Lessons and projects in the classroom that bring the learning to life in ways not possible in the past. (We will discuss this in detail in Chapter 3 with the Success Zone Model.) A blended learn-

ing approach using both Acellus Gold and classroom instruction allows the teacher to explore different ways of learning that tap into the strengths of every student in the classroom. The concept of “time lost” to menial tasks is addressed and handled by the Acellus system -- empowering the teacher to do more than ever before with their students.

The Role of the 21st Century Teacher

Throughout the history of education, the role of the teacher has been consistent -- serving as the learning facilitator and leader in the classroom for the students. The teacher is the person who gets to know, and understand, their students better than anyone else in the school. From learning about individual strengths and weaknesses to making sure they have the right materials and tools to be successful, the classroom teacher’s awesome responsibility to the students has never changed.

The role of the teacher in today’s 21st-century classroom has never been more important. Technology has altered education in ways not possible in the past. The seismic shift that has occurred due to the expanded use of technological resources has enabled the teacher to communicate, educate, facilitate, and reach students more than ever before. The key for educators is understanding what their new role is in the classroom -- and utilizing the technological tools necessary to ensure student progress and success.

A teacher’s first responsibility has always been, and will always be, to the students. Classroom instruction is dictated and controlled by the educator in the room. At times, this can be a daunting task for the teacher. State standards, benchmarks, and standardized testing often drive the course of instruction during the entire school year. The classroom teacher must fully understand what needs to be accomplished while also ensuring the learning process is both rewarding and long-lasting as well. A “Master Teacher” is always looking for ways to improve instruction that both differentiate to meet the needs of all learners, and provide cutting-edge techniques that are relevant to today’s students.

A good rule of thumb for classroom teachers is to mix up the method of instruction at different intervals of the lesson. Using the same task for long periods of time (the entire period, for example) runs the risk of monotonous boredom for the students. When teachers change up the routine and tasks, however, the learning process stays fresh -- allowing for more retention of information. The Success Zone

Model (which will be covered more in Chapter 3) uses the technology of Acellus lessons in combination with teacher-led Special Lessons to break up class time into sections incorporating videos, formative assessments and student interaction. Instead of the students only completing one kind of task, the classroom comes to life with interaction, analysis, and technology working together.

Technology can assist the classroom teacher in helping invent different ways to improve instruction, while also keeping students on task. The use of Acellus Gold empowers the classroom teacher with additional tools and instructional options needed for success. Daily video lessons and assessments not only provide a different means to teach specific concepts, but also engage students with an additional learning method that allows them to see, hear, and interact with technology.

Blended learning involves the classroom teacher incorporating different learning techniques into their daily activities. Technology in the 21st century has enabled teachers to use new methods not available in the past. It goes without saying that today's students have grown up with technology literally at their fingertips. Almost since birth, children have been in front of some sort of screen. Often, the students walking into the classroom understand more about the use of technology than perhaps even the teacher! However, the educator still is expected to understand how to use technology in ways that get the most out of the students and their learning.

As a result, teachers – those who can incorporate tools that enhance learning retention, allow for time to be used wisely, invigorate learning, and excite students – create a classroom environment that breeds success. The use of the Acellus Gold learning system creates a partnership between the teacher and technology. It allows for learning to foster and grow in ways that reach all kinds of learners in the classroom. The Acellus system creates instant data that can be used by the teacher to enhance classroom activities to meet the needs of students for whom certain areas of instruction need to be reinforced. All of this creates a truly blended 21st-century classroom where everyone is allowed to share in academic success that is individualized like never before.

2.2: Classroom Goals

Master Teachers are always looking for ways to improve their instructional strategies in the classroom. With each new school year, the opportunity to try new ideas

and new technologies arises. The goal of any teacher is not simply to deliver knowledge to the students, but to find ways in which the students can become active participants in the process itself.

This does not mean that a teacher should try out every new platform presented to them. Time must be spent on researching and figuring out the best ways to use what is available to progress the students forward and grow their abilities and knowledge – all the while factoring in the standards and curriculum that must be addressed during the school year. Therefore, understanding how technology, like Acellus Gold, works with the classroom teacher is at the forefront of ensuring success.

The Acellus Gold system is designed with the teacher in mind. It is organized in such a way that all the tools provided are literally at the fingertips of the educator. The lessons provided by Acellus blend with the teacher's instruction to create a classroom that allows both the teacher and the student to thrive.

Using Acellus Gold in the Classroom

The Acellus Gold system enhances learning in such a way that a truly blended classroom environment is created. Along the way, the amount of support the teacher receives is constant and empowering. The ability of the classroom teacher to understand, interpret, and adjust learning for each individual student empowers the educator to truly evaluate each student's progress as never before.

It all begins with the Active Teacher Interface feature for the classroom teacher (see Figure 2.6). The “Active Teacher Interface” is truly what it sounds like – it is a virtual space for teachers where all the Acellus Gold tools are available for use. Here, teachers can add new classes, enroll students, set up class goals, communicate with parents, and create a unique learning environment that fits the needs of their students.

The Acellus Gold system already has a curriculum of lessons in place ready for the teacher to use in their instruction. In the past, teachers using technology had to spend countless hours researching various on-line sites in search of the perfect video to play for one particular lesson. Master Teachers, always looking for ways to improve instruction, could take hours to simply find one short clip that would enhance just one lesson.



Figure 2.6: The Live Monitor in the Active Teacher Interface keeps teachers up-to-date on how each student is doing. Data is instantly available via the Acellus Gold Active Teacher Interface on how they are progressing through each assignment and course.

When teachers work in partnership with the Acellus Gold system, the lesson videos – as well as the questions that follow – are already built into the courseware. The Master Teacher, following the curriculum of the Acellus system, understands that the material covered in the daily lessons is partnering with the educational goals of the course and meeting state standards and benchmarks. The time that is saved for the classroom teacher is immeasurable.

As a result, more of a teacher's energy and resources can be used where it belongs – with the students. Educators create a partnership with the Acellus system and are empowered with the ability to use the tools to their classroom advantage. Once again, it is the classroom teacher who is in the trenches, teaming up with Acellus Gold to provide the best learning environment possible for their students.

Through the lessons provided with Acellus Gold, a partnership develops between the classroom teacher and the system itself. Master Teachers understand that incorporating multiple forms of learning is paramount to creating a classroom that

provides for all learning styles. The best educational instructors mix up methods to tap into each and every student in their care. Acellus Gold lessons provide the teacher with an additional “voice” in the classroom for the students. The lessons truly become part of the routine of the class itself, while the Live Monitor helps the teacher see what students require their individualized attention (see Figure 2.7).



Figure 2.7: As the information pop-up explains, cards are shown on the Live Monitor for all students who are actively working on their courses, listed by priority with color-coded flags based on who needs help the most. Interventional actions are recommended as needed, many of which can be initiated right here on the cards.

The Active Teacher Interface/Live Monitor

When students access the daily Acellus Gold lessons, it is just the beginning of the awesome power the system provides to the educator. As students work through their lessons, the classroom teacher can view their progress with the Active Teacher Interface feature.

The Active Teacher Interface offers the classroom instructor the ability to be an active instructor with the students using Acellus Gold in ways not possible before.

Through this platform, teachers are able to have hands-on access to student progress in real time. A key feature on the interface is the Student Goal Progress tab. This shows the classroom teacher the total progress for the entire classroom for that particular day, or lesson. The teacher can monitor (0-100%) the total daily success for the entire class. The tab also has a feature that enables the classroom teacher to see which students are possibly having issues with the assignment.

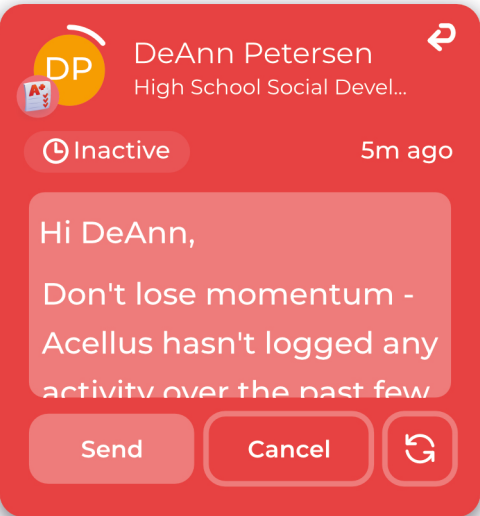


Figure 2.8: When a student’s card is red, the student needs help. The back side of the card offers suggestions for messages to send to the student.

While understanding class success on an assignment is a great way to view the big picture of the class, individual progress is a vital part of the Live Monitor feature. The interface creates a “card” for each student that is visible to the classroom instructor. The cards that immediately show up on the Live Monitor show those students who are struggling the most with the current classroom assignment. The cards are color-coded for instant understanding – green signifies no issues; yellow indicates a possible issue that is slowing the student down; red alerts the teacher to a major problem that has halted progress.

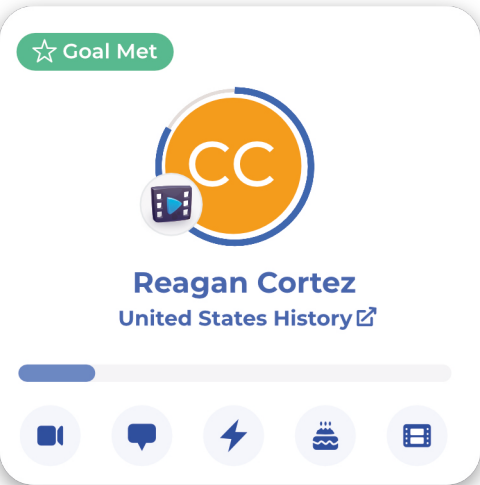


Figure 2.9: The cards in the Live Monitor provide the teacher with the ability to interact with the student in real time, and provide a lot of information, such as which course the student is working on, whether she has met her goal in this course, etc.

Students who are in the “red” are in the most need of intervention and attention by the classroom teacher (see Figure 2.8). Here, the teacher has a wide variety of options available through Acellus Gold. The student card will show the teacher exactly how much time the student has spent on the lesson itself – and any inactivity that has resulted. In addition, the teacher can click on the icon next to the student’s initials on the card and view the exact part of the lesson they are currently stuck on.

From there, Acellus provides Action Buttons on the reverse side of the student card. The learning system offers the teacher a wide range of features to help the student get back on track (see Figure 2.9). From simply shaking their screen, to live messaging, and even the use of live video in the event there is a real learning issue for the student. If the

Acellus system detects a student is guessing too often, that will also appear on the student card, with the option for the teacher to send a pre-recorded Acellus video on why guessing is not a good course of action.

On the flip side, if a student is progressing through the lessons well and is staying on task, the Acellus system also offers teacher feedback in the form of shooting confetti across their screen or sending a congratulatory message to the student for a job well done (see Figure 2.10). The goal for the classroom teacher is 100% success in the assigned lesson. The tools provided with simple color coding by the system enables the teacher to gain invaluable data to provide instant help, or rewards, to those who need it.

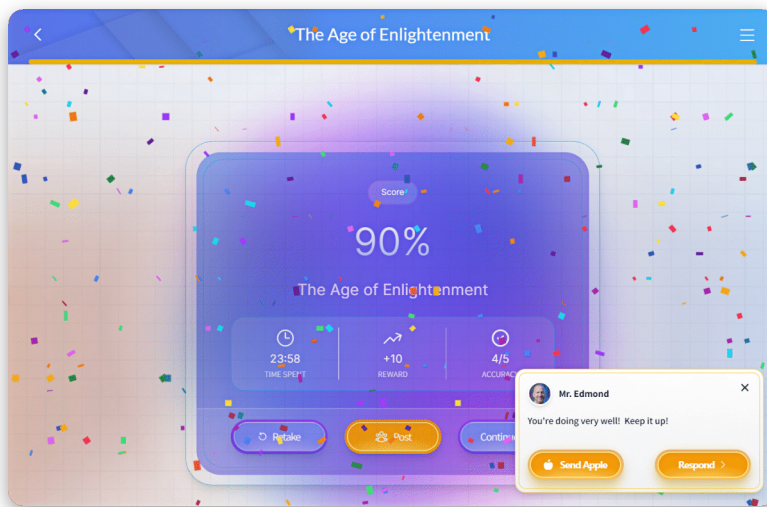


Figure 2.10: Sending confetti with a message can encourage students at important moments. Notice that the student has the opportunity to respond.

It is important to point out that all features, either for struggling or successful students, are kept confidential between the teacher and the student. No one student will feel as if they are being made an example of in front of the entire class. The communication through the system can be discrete and not announced to the entire group.

Once again, the classroom teacher is empowered with instant feedback and data on student performance with the Live Monitor feature found in the Active Teacher Interface. The ability for classroom teachers to monitor student progress either in

the actual classroom or remotely, creates a different level of understanding about why a student might be struggling in learning the content. For instance, if a student is consistently not completing assignments outside of the classroom, the teacher can now have actual data to start the conversation with. Knowing exactly how much time is being spent on each lesson, understanding the effort being put forth by the student, and viewing the larger picture of what might be happening when the student is not in the classroom all become powerful tools to allow the teacher to better understand and incorporate ways to assist that student like never before.

Vectored Instruction & Deficiency Diagnostic Intervention

A key piece of the Active Teacher Interface is the Vectored Instruction Intervention section. When partnered with Deficiency Diagnostics, this valuable tool not only helps students successfully progress forward in their studies, it also saves teachers valuable energy and time that honestly is not available when dealing with large numbers of students each and every day.

Deficiency Diagnostics is a tool used by Acellus Gold to identify when a student is struggling with a specific concept in a lesson. Acellus analyzes every single answer that students place into the system. It is constantly monitoring where learning gaps are taking place and analyzing exactly where the issue exists in the essential knowledge for each subject. When the system interprets an issue, the Acellus Courseware Development team is alerted and gets to work right away on how to fix the problem.

Deficiency Diagnostics is at the heart of the constant evaluation that the Acellus system is doing to make learning improve immediately for the students. It uses special problems that have been created to find out why students are answering a question, or concept, incorrectly. It gathers data to determine why the students are choosing one particular wrong answer - and then assesses where the specific learning gap is taking place.

Once the gap is identified, a help video can then be created for that specific wrong answer. When the student clicks on that wrong answer, the help video is triggered which then aids them in understanding why that particular response is incorrect. The help video then directs them back to the problem with additional encourage-

ment to view the content, and the question, differently. *(Note - the help video does NOT tell the student the correct answer. Instead, it pushes their thinking in a different direction.)*

The Deficiency Diagnostic tool allows for gaps in learning to be identified by having the students themselves provide the data. It collects student responses, analyzes the data and alerts the Courseware Development team to common misconceptions - enabling the misconception to be addressed and move learning forward. The ability for the system to instantly detect, and address, issues provides an immeasurable advantage for educators.

The time that the Deficiency Diagnostic tool saves for teachers is invaluable for education. Rather than the teacher having to find each problem that students are struggling with, the Acellus team works together with the tools of technology to address gaps in learning and help students achieve and move forward. Once again, the instant data and analysis happens in real-time, while saving classroom teachers valuable time that can be used to directly help individual learning.

Once the diagnostic tool has identified the conceptual issue, the Acellus system automatically triggers Vectored Instruction when it recognizes that the student is consistently missing answers due to a lack of understanding of the specific concept. Vectored Instruction works to bridge the gaps that exist in a student's understanding by providing reinforcement on the missing concept.

For example, let's say a student is taking a course on United States Government. The assigned lesson for the day deals with the right to freedom of speech. The student is constantly missing answers due to a lack of understanding of the fundamental reason why the Bill of Rights was created. With the help of Deficiency Diagnostics, the Acellus Gold system would trigger Vectored Instruction - incorporating a lesson on the Bill of Rights from a pre-requisite curriculum. The student would watch the video and answer the questions on the Bill of Rights. Once the student has mastered the missing concept, Vectored Instruction would then return the student back to the original lesson on freedom of speech and have them complete the activities once again.

The classroom teacher has access, via the Active Teacher Interface, to a dashboard page listing how many times Vectored Instruction has been used by students in

the class. The teacher is able to see exactly what missed concepts have been covered (see Figure 2.11). In addition, data is provided to the teacher showing how much student performance has increased with the use of Vectored Instruction lessons.



Figure 2.11: The Vectored Instruction Intervention section of the Active Teacher Interface displays the total number of interventions the system has made, along with the average percentage of score increase. Also included are several examples of recent interventions.

If the instructor clicks the “view more” button, individual student reports are generated (see Figure 2.12). Here, the teacher can see exactly what steps were the most difficult for students to grasp -- as well as which lesson Vectored Instruction used to bridge the gap in the learning process. Finally, the classroom teacher sees the “before” and “after” scores the student achieved. As a result, the teacher is able to identify where the gaps in learning existed, and exactly what was done to bridge the learning.

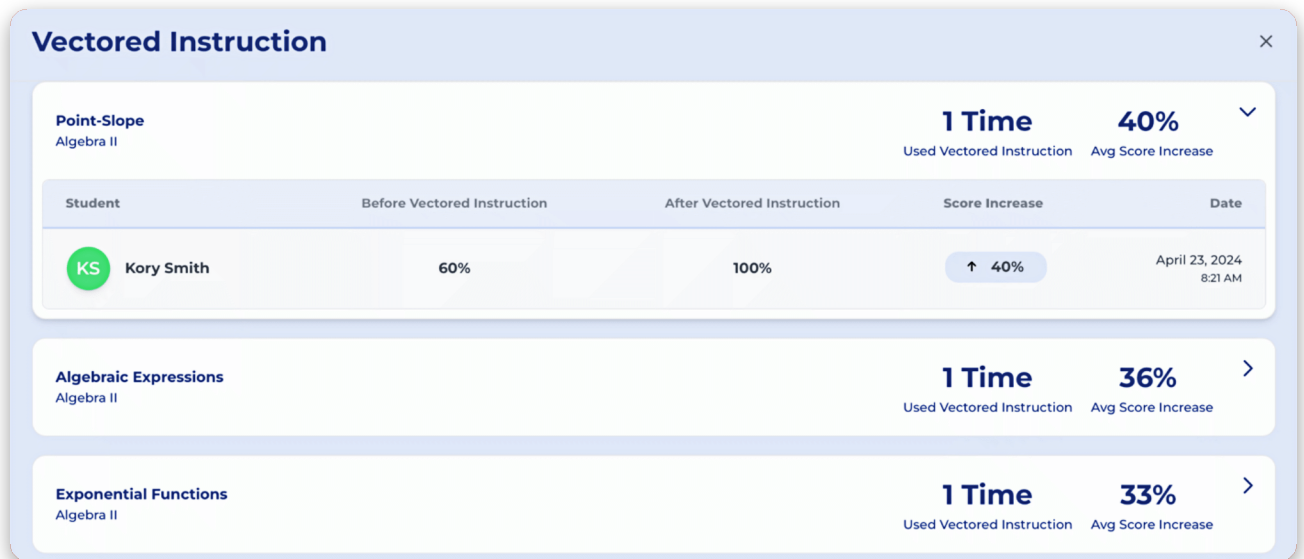


Figure 2.12: Selecting “View more” in the Vectored Instruction section on the Active Teacher Interface displays the total number of interventions for each concept in each course. Selecting each concept provides individual student details.

The system has once again saved valuable time for teachers using the Live Monitor. In the past the possibility of teachers being able to instantly identify gaps in learning -- and then immediately being able to fill those gaps -- was almost impossible. The partnership of Acellus technology with the knowledge and abilities of the classroom teacher creates scenarios where student success is achievable at a much higher level than in the past.

Deficiency Diagnostics and Vectored Instruction are invaluable tools for all classroom teachers. In the world of education, it is nearly impossible for a teacher to be able to go back and teach a wide variety of past concepts to each individual student. Acellus provides teachers with a means of bridging specific individual learning gaps that simply could not have been done regularly before. Hours that used to be lost re-teaching content to the masses are now taken care of on an individual basis for those students who are struggling. The use of both Deficiency Diagnostics and Vectored Instruction creates a partnership between Acellus and the classroom teacher -- all pointing in the direction of moving students forward and helping them achieve success.

Progress Reports

In addition to the Live Monitor feature, the Active Teacher Interface also provides the teacher with the ability to create active progress reports (see Figure 2.13). By simply clicking on the “Reports” tab at the side of the interface, the teacher is enabled to generate an up-to-date report for the individual teacher, course, or student.

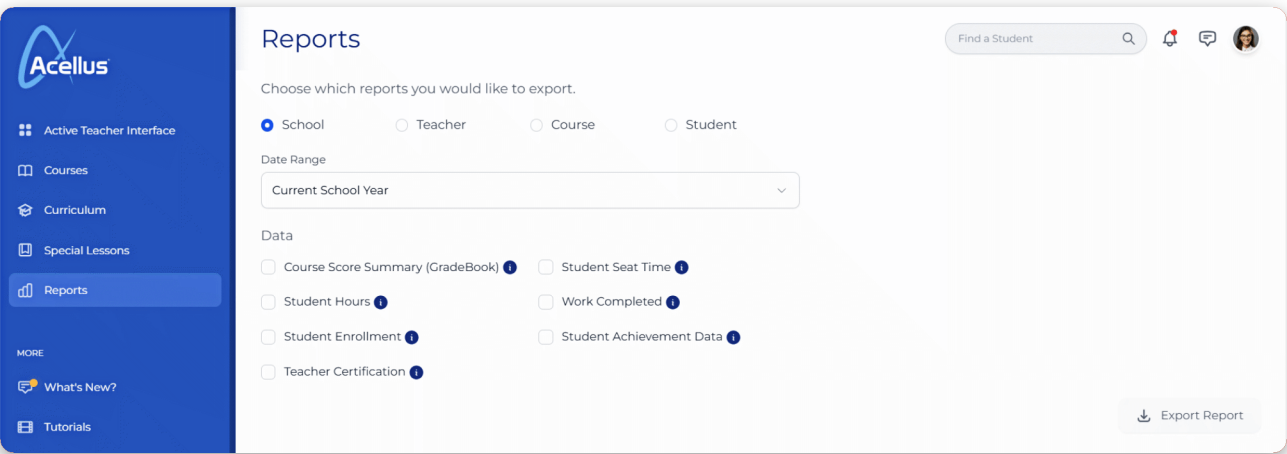


Figure 2.13: Teachers can select reports for the entire school or for selected teachers, courses, or students. Seven different reports are available.

The reports created by Acellus organize the data into the following available categories: Course Score Summary; Student Seat Time; Student Hours; Student Achievement Data; and Work Completed. Each of these creates a very specific, detailed report. For example, the Course Score Summary (Gradebook) shows exactly where each student currently stands in the course (the step they are on), their performance (grade), time spent, and how many times the classroom teacher has interacted with that specific student, along with additional data (see Figure 2.14). Once the classroom teacher has selected the type of report (out of the available seven) they wish to generate, the system gathers the data and exports the report (via CSV) to the teacher.

Data on student progress is a click away for the classroom teacher. Once again, the Acellus Gold system saves the educator valuable time that can be spent on helping students achieve their goals to their greatest learning potential. In the past, teachers had to generate these kinds of reports on their own - sometimes even by

Last Name	First Name	Acellus ID	Course Title	Subject	Date of Birth
Andromana	Lisabeth	(779-555-3218)	AP Eng Lang and Comp	Lang Arts/Read	7/26/2007
Andromana	Lisabeth	(779-555-3218)	Algebra II	Math	7/26/2007
Andromana	Lisabeth	(779-555-3218)	General Chemistry	Science	7/26/2007

Grade Level	Course Score	Course Grade (Letter)	Last Activity Date	Attndnc %	Problem Score %	Unit Exam Score %	Current Step
11	92%	A	1/9/2025	27%	93%	91%	138. Revision - Unity and Coherence
11	87%	A-	1/9/2025	7%	88%	86%	21. Slope-Intercept

Figure 2.14: The Course Score Summary (GradeBook) Report includes a lot of detail. The above data was searched by student name. (Course Progress, Seat Time - Hours, and Teacher Interaction Count not shown.)

hand. Now, Acellus partners with the educator by providing constant feedback the moment it is needed.

Special Lessons

Master Teachers are always looking for ways to enhance the learning in their classrooms. They understand that learning is meant to be enjoyed. As a result, Master Teachers are constantly in search of a new style that will enable students to grasp the material in ways that create critical thinking, interaction, and just plain old fun in the classroom!

The Active Teacher Interface provides the classroom teacher with Special Lesson Suggestions (see Figure 2.15). These Special Lessons are embedded into the curriculum of the exact course being used in the classroom. When the teacher clicks on the suggested Special Lesson, an additional tab opens up with classroom materials for the students (see Figure 2.16).

Acellus Gold Special Lessons provide a breakdown of the exercise on both a student resource and a teacher resource. The materials outline the format and goals of the Special Lesson (see Figure 2.17). The teacher can utilize these tools to set up the classroom as needed for the implementation of the Special Lesson with the students.

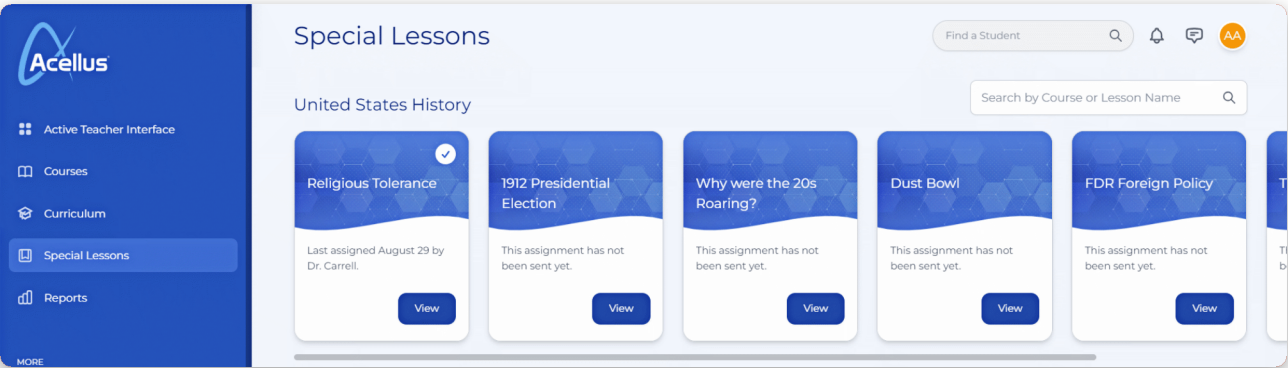


Figure 2.15: *Special Lessons* are teacher-led lessons that incorporate standards-compliant activities such as discussions, group projects, and debate. They are intended to be administered by teachers however they see fit.



Figure 2.16: The Student Resource can be sent to student through the Acellus Interface, or can be printed and passed out in class. Teachers are able to customize the assignment by typing a message to send along.

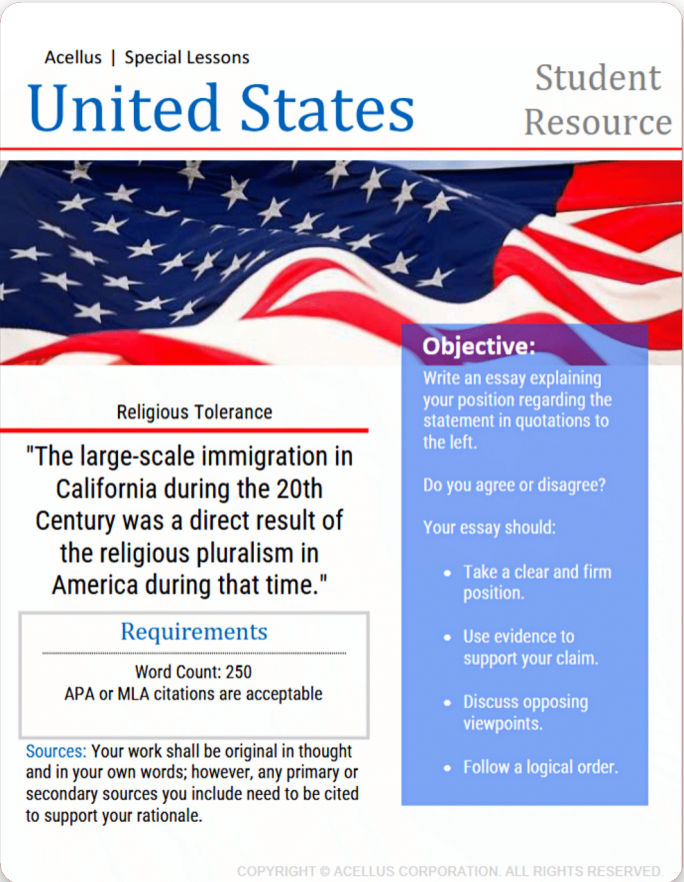


Figure 2.17: Teachers can use *Special Lessons* in any way they desire – whether as individual assignments, as group discussions or debates, or in some other way.

The vital part of each Special Lesson is that the opportunity is created for the classroom teacher to get actively involved in the learning goals of the lesson. The entire class participates in the Special Lesson - meaning the teacher is front-and-center in being the leader in the classroom. Special Lessons can vary from classroom lab work, to debates, to interactive activities. They are a key resource in bringing the entire classroom back together as a whole to reinforce, introduce, or enhance a specific part of the curriculum. *(We will discuss the implementation of Special Lessons further in the Art of Teaching in Chapter 3.)*

The key piece of the Special Lesson feature is that it is at the discretion of the classroom Master Teachers themselves. It is these teachers who use their interaction and communication skills to bring the learning process to life in the classroom. The interactions, discussions, and activities created and directed by the teacher via the Special Lessons empower the learning process beyond the interface of technology. Teachers (Rock Stars!) become the facilitators and leaders in helping students foster learning in new and different ways.

Special Lessons incorporate the higher-order cognitive skills found in Norman Webb's Depth of Knowledge (DOK) research.⁵ In 1999, Webb's research developed four levels (depths) of learning that take place:

- DOK 1: Recall and Reproduce
 - Who, What, Where, When
- DOK 2: Apply Knowledge and Skills/Basic Reasoning
 - How did it happen? Why does it operate?
- DOK 3: Strategic Thinking
 - How can I solve a problem? What is the cause and effect?
- DOK 4: Extensive Thinking
 - What do you think, feel, or believe? What if?

DOK levels 3 (Strategic Thinking) and 4 (Extended Thinking) are at the heart of what Special Lessons tap into in the classroom. Students uncover problems and issues in a more abstract environment. They must incorporate problem-solving skills to real-world topics. Getting students to think analytically stretches their

⁵ Paul Main, (2023, May 11). "Webb's Depth of Knowledge," Structural Learning, May 11, 2023, <https://www.structural-learning.com/post/webbs-depth-of-knowledge>.

imagination and understanding of the core concepts behind the daily activities and lessons.

Once again, valuable time is saved with the use of the Special Lessons by the classroom teachers. All that is needed is simply creating a message to the class about the Special Lesson, and assigning it with a simple click of a button. From there, the teacher takes over and the enjoyment of enhanced learning takes place. The value of the Master Teacher's leadership in the use of Special Lessons is vital to the student experience in the classroom.

Team Approach to Learning

The Acellus Gold platform is created with the concept of team-teaching in mind. The tools offered by the Acellus learning system are designed to work hand-in-hand with the classroom Master Teacher in creating the best learning environment possible. More than ever before, the teacher is empowered with the tools to individually monitor, assist, and progress students forward.

Through the Active Teacher Interface, the Acellus Gold system moves learning beyond the walls of the classroom. It allows both the teacher and the student to interact with a wide variety of resources to help learning come alive. All the while, classroom instruction is strengthened and supported with concepts and lessons that the teacher can utilize as they see fit. The partnership between Acellus and Master Teachers creates the best possible environment for sustained student success in the 21st century.

2.3: Communication

In the education community, communication is vital to success at all levels:

- Communication between the teacher and the student.
- Communication between the teacher and the home.
- Communication between teachers themselves.

Regardless of which line of communication is being addressed, the link between communication and success cannot be ignored.

Master Teachers understand that communication is the key to educational progress. From the very start of the school year, Master Teachers are working dili-

gently to establish open and clear means by which information, data, and ultimately TRUST, are exchanged. Without communication, the educational process simply will not exist. Thankfully, with today's technology, communication has never been easier and more effective.

Parent Communication

A key component for success in the classroom is open communication between the teacher and the parent/guardian. Parents must be able to be up to date on how their child is performing while having clear pathways to access information and data as well. The 21st century has provided new means of communication not possible in the past. Master Teachers understand the vital importance of an open line between home and school.

Thankfully, the Acellus system has provided both teachers and parents the means to send and receive information instantly. Through access to class materials, lessons, course syllabi, email, and progress checks, getting parents to “buy in” to their child's educational experience has never been easier. It all starts, however, with the teacher.

Adding a Parent

The Acellus Gold system provides the school system, and the individual teacher, the capability to add parents/guardians to the student accounts as needed (see Figure 2.18). This is an important step in the process and places the responsibility of first contact with the home in the hands of the school itself. It is vital that parent emails be added to student accounts as soon as they are available to do so. Parent support (helping to get a student to sign in to their account and get to work) is of the utmost importance for the overall success of the child.

Master Teachers understand the importance of including parents from the very beginning of the school year. That first contact is so vital for establishing an open line of communication. In the past, teachers had to rely on sending literal “notes” and “forms” home during the first week of school for signatures. When, and sometimes “if,” the paperwork made it back to the classroom, the teacher had to hope that all the material was viewed by the parent -- and that the signature was real (not forged by the student).

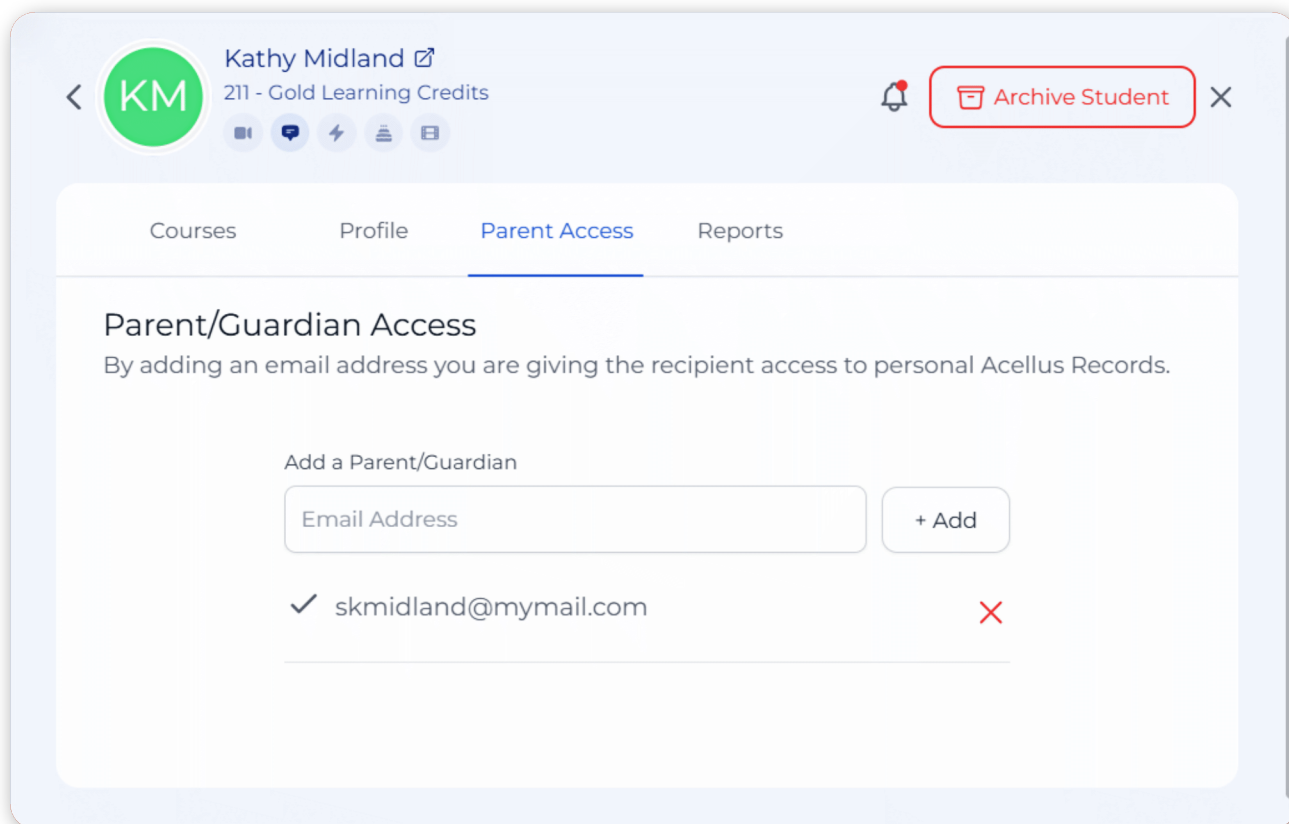


Figure 2.18: To add a parent email, find a student and go to their account. Under the Parent Access tab, enter the parent's email address. The parent will automatically receive an email with instructions for accessing the Parent Portal.

Acellus creates a seamless connection between the home and the school that does not rely on the student carrying home numerous papers for their parents to sift through quickly and hopefully return. Once the parent has been added to the student account on Acellus, all information is just a click away for the parent to access. This invaluable tool creates transparency between the classroom and the home -- eliminating many of the questions and concerns parents often have with too little information at their disposal.

Parent Interface

Once the parent has been granted access to their student's Acellus account, a treasure trove of data and information becomes instantly available. The parent dashboard allows them to see exactly how much time has been spent in each of their child's courses (see Figure 2.19). The interface shows every class their student is

taking -- allowing the parent to view detailed information.

By simply clicking on a specific course, the parent is shown metrics such as overall score; current course progress; daily goals being met; and the average time spent per day on that particular course (see Figure 2.20). In addition, the parents can view each and every

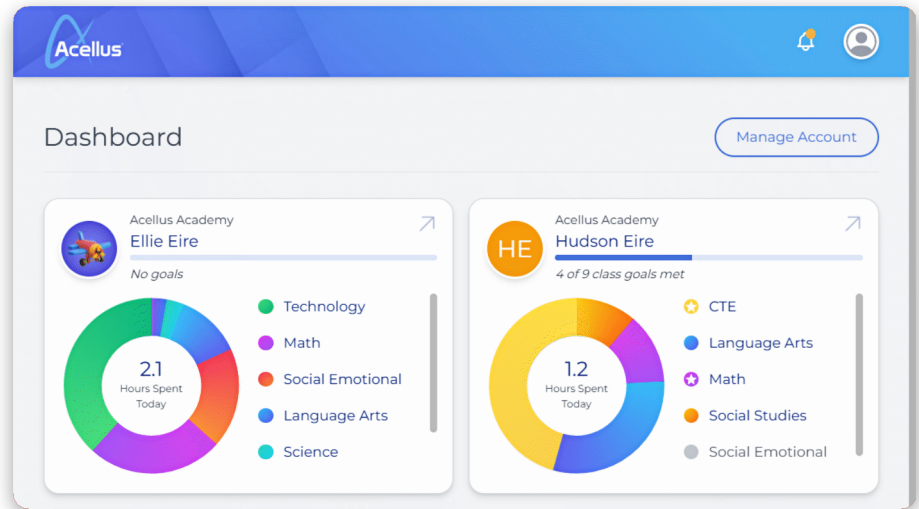


Figure 2.19: To add a parent email, find a student and go to their account. Under the Parent Access tab, enter the parent's email address. The parent will automatically receive an email with instructions for accessing the Parent Portal.

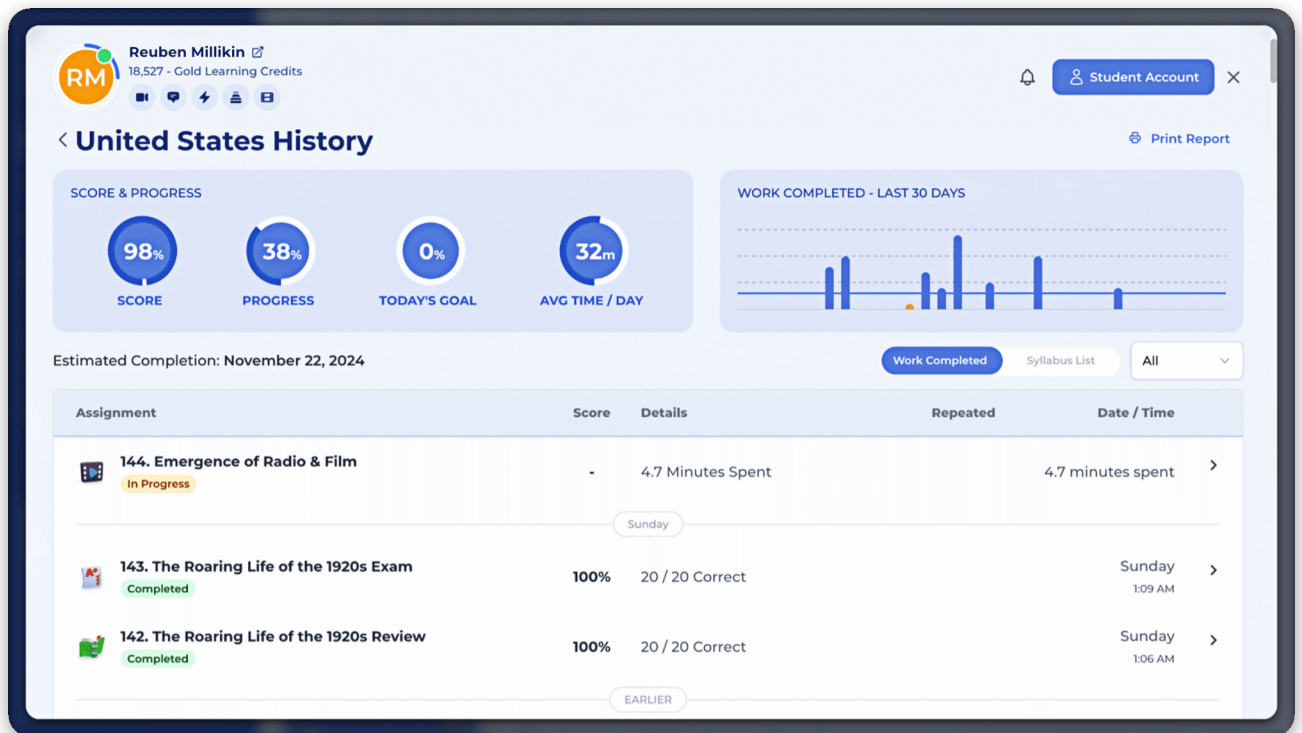


Figure 2.20: The Parent Interface gives parents enough information to empower them to help – but not enough to give them unfair advantage. Parents are not provided with the correct answers for problems their students have missed.

step (lesson) that their child has been assigned in the course. They can access the actual lesson videos and questions to see specifically how their student has performed. Acellus also provides the exact amount of time the student has spent on each lesson -- and each question.

Teachers might be concerned that parents have access to the videos and questions being asked in the lessons. However, the Acellus system does *not* allow parents to view the correct answers to the responses. This is vital to assuring the integrity of work being done at home by the students.

Additionally, having the parents able to log in and see what each lesson entails for their student also enables greater communication and transparency between the teacher and home. Everyone -- student, teacher, parent -- is on the same page and able to understand the same information that is being seen via the Acellus system. A partnership develops between the stakeholders of the child's education.

The parent interface on Acellus Gold also provides an overall Grade Point Average (GPA) for the student for all of their courses (see Figure 2.21). Additionally, a breakdown is provided, via pie chart, of how much time has been spent on each subject area for that particular week. By clicking on the pie chart, a detailed monthly graph pops up -- showing how much time the student has spent on each subject for each day of the month. Below the GPA and pie chart graphics, the parent is also shown a bar graph with details on how much total time has been spent for the week, as well as exactly how many steps the student has completed in all of their courses.

The days of parents not being able to understand what their child is learning, how much effort their child is giving, and what gaps exist in their learning are over. Acellus places all student learning data and information at the fingertips of the parents in the home. More now than ever before, it is up to the Master Teacher to get the parents to buy into the process by encouraging and explaining the various tools the system provides. As in the past, without the efforts of the classroom teacher, the communication between the school and the home will break down and cease to exist. The teacher is still at the heart of the process and must find ways to keep the parents involved in their student's educational success.

One such way Master Teachers can get the parents to buy into the process is by hosting online and in-person "open houses" to walk the parents through the

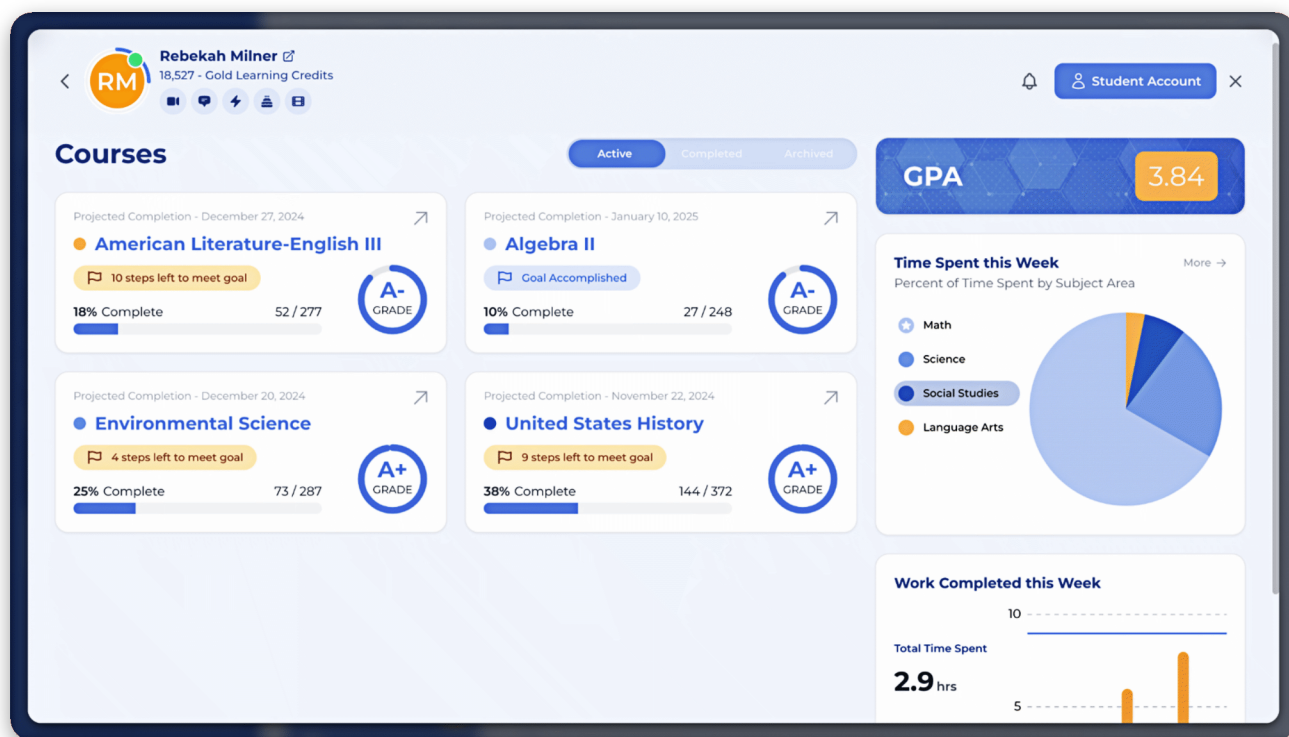


Figure 2.21: Parents can use the Time Spent this Week section of the Parent's dashboard to help their students manage their time. Selecting More gives them additional information.

process. Here, communication lines can be established -- and trust can begin to form between the classroom and home. Additionally, teachers can provide tutorial "help" videos and handouts to parents via email, or school web pages, to assist in getting parents set up and ready to go from day one. Instead of relying on the parents to physically travel to the brick-and-mortar building, the tools of Acellus provide a 21st-century approach to communication.

All Master Teachers welcome and often hope that parents will get involved in their student's learning and success. The data provided by the parent interface on the Acellus system not only encourages parent involvement, but it saves the classroom teacher valuable time in communicating exactly what has been taught in class, and catching up with the parent on the reason(s) why their student might not be succeeding as hoped. By giving parents access to their student's data, a huge step in the communication process is initiated by the Acellus system itself. Thus, when conversations between the teacher and the parent occur, commonality of language exists -- allowing both parties to get into the specifics needed to

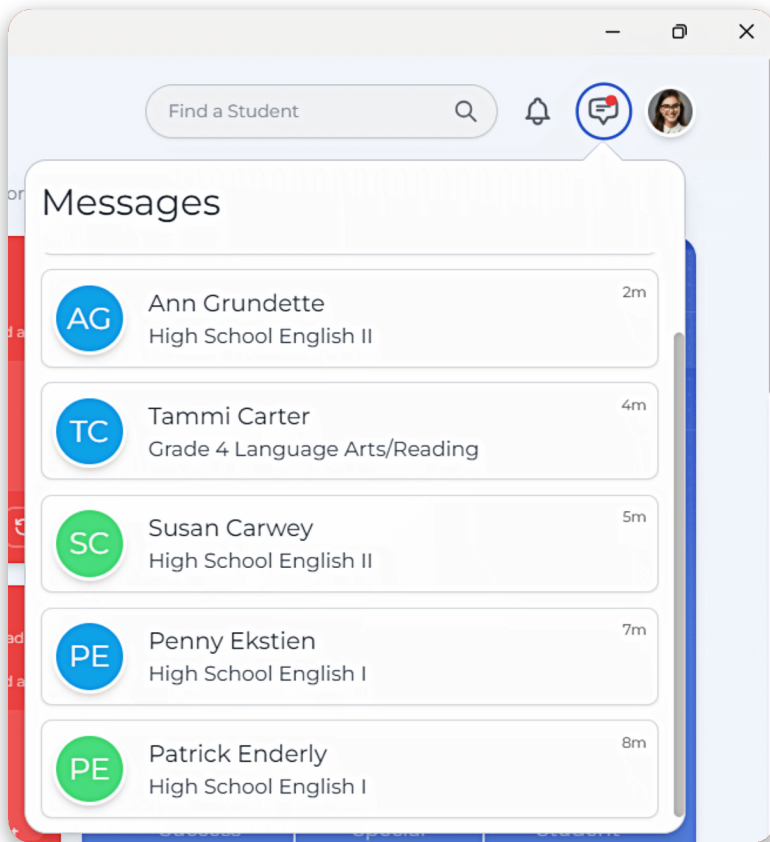


Figure 2.22: Acellus gives students the ability to message their teachers from within the Student Interface. Teachers can see messages from any student taking a course they monitor – and students feel there is always help available.

help the student at a much quicker, and more meaningful, pace.

Importance of Student Communication

Throughout the history of education, communication between the teacher and the student has been a vital part of overall success in, and out, of the classroom. Over time, the means by which teachers and students communicate have drastically changed. Technological advances have seen communication go from mainly classroom exchanges during the school day, to the ability to instantly assist students in the home (see Figure 2.22). Once again, Master Teachers are empowered to not only monitor student progress in real-time but instantly address specific learning issues as well.

When students are physically in the classroom, teachers can observe effort first-hand. Problems can be addressed with the simple raising of a hand and asking a question (as we

will see, students in the classroom can also use the Acellus live messaging system to communicate with the teacher, rather than the entire class being made aware). The importance of this step in the process is still at the heart of being a teacher. One key issue, however, has always been the lack of knowledge – or control – of student effort both inside and outside the actual classroom. Teachers have struggled in the past with knowing how much effort students are truly placing in homework assignments and projects that are meant to be completed in a specific amount of time.

Live Monitor and Messaging System

Acellus not only addresses the information gap for educators -- but goes a long way in solving many issues that have stood in the way of total student success outside the classroom. It begins with the Live Monitor feature previously discussed (see Figure 2.23). When assignments are given by the classroom teacher, data is instantly available via the Active Teacher Interface on how students are progressing through the assignment.



Figure 2.23: The Live Monitor gives teachers the ability to communicate with students through the Acellus system.

As stated earlier, the Live Monitor will flag any student who is struggling with the assignment by showing their student card in “red” at the top of the interface. On one side of the red card, the teacher will be able to see what exactly the student is having issues with as well as how much time has been spent on the assignment. If progress has stopped, the card will show that to the teacher. The reverse side of the card will give the teacher “suggested action” steps they can take to get the student back on track. This can be in the form of simply shaking their screen (in the event of inactivity), or sending a quick message (teachers can choose from a series of pre-written messages or create their own).

Of course, when the students are in the physical classroom setting, the Master Teacher can address the issues facing the students first-hand by talking with them and assisting them one-on-one as needed. In addition, students in a classroom can also use the messaging interface to speak to the teacher in order to maintain privacy with their peers. However, what happens if the student is performing poorly outside of the classroom? What can the teacher do to help students who are not physically in front of them? This is where the Live Messaging System comes into play.

Live Messaging System

Teachers are sometimes faced with the daunting task of trying to understand exactly what issues students are having with certain concepts and lessons. This is especially true when students attempt to complete work outside of the classroom setting or school day. The Live Messaging System offers a quick and easy way for students and teachers to stay on the same page when not face-to-face.

It begins when the student sends a message, via the Acellus Gold interface, to the teacher, asking for some kind of assistance. If the student is having an issue with the lesson, or concept, they can quickly inform the teacher of their problem. If the teacher is signed in and active in the Acellus system, the message will automatically pop up on their screen. If the teacher is not active, the message will appear in a queue where other teachers in the same subject area can also offer assistance if they wish. This provides an opportunity for a community of teachers to help not just the students, but also each other, in quickly addressing learning issues.

Once the teacher clicks on the message (*which can also be accomplished by clicking the message tab on the student profile card as well*) they will be taken to a screen with a variety of ways in which to respond to the student in need (see Figure 2.24). Acellus includes response templates where teachers can simply click on a quick note to send to the student. For instance, if the teacher looks at the current lesson summary where the student is having issues, they might realize that the student has only answered one question. The quick response would be to tell the student to first complete the entire step (that way Vectored Instruction could be triggered to aid the student in a learning deficiency they are experiencing).

It is also possible for teachers to create their own custom messages to the students. If the issue is more complex than the answers provided by the message templates, the teacher can address these first-hand. It should be noted that

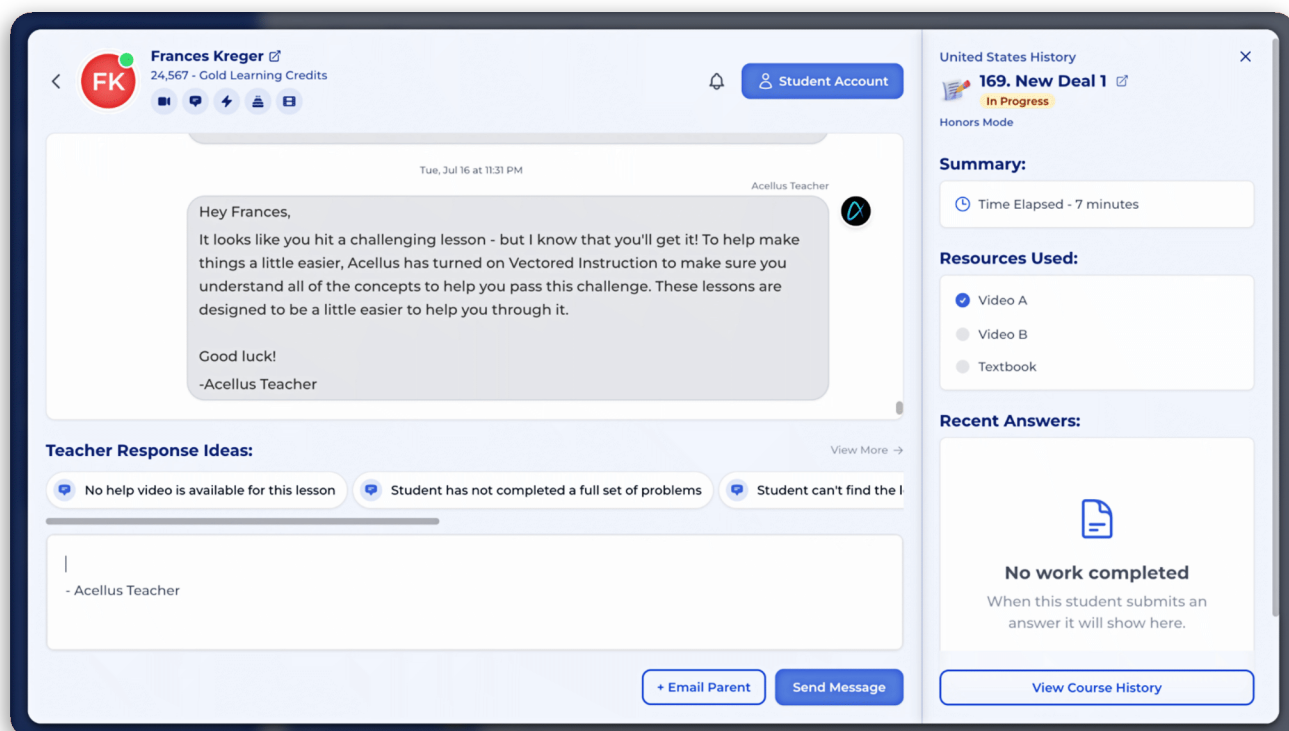


Figure 2.24: On the Messaging screen, teachers can not only reach out to students through the Acellus System, but can also see details of the student's work, empowering them to intervene appropriately.

Master Teachers understand that teaching over messages is not advised. Offering solutions to problems by using the features of Acellus is the proper way to go. For example, if a teacher investigates the problem and realizes that the many resources, such as the online textbook or help video feature, have not been utilized by the student, they can direct them to those solutions rather than trying to reteach the lesson via messages. Under no circumstances should teachers ever simply give the correct answer to the student. The key is to address the issue, and encourage the student to keep moving forward.

Additionally, the teacher may also message the parent if the issue needs their attention at home. This is extremely important if the teacher requires home encouragement as well as motivation. It should be noted, however, that the parent's email needs to be a part of the Acellus Gold system in order for this feature to be used. Again, open communication from the beginning of the school year is the key to overall success.

Now more than ever before teachers have become the heart of educational communication and support. Twenty-first-century technological advances enable learning to take place virtually anywhere and at any time. Master Teachers understand that their role in this communication process has evolved and changed due to technology. The ability of teachers to openly communicate is vital to the educational success of all students. Acellus empowers educators to bridge the gap between the classroom and home. The result is truly an educational community that is on the same page, helping to motivate the child to new levels of success.

2.4: Addressing Teacher Concerns

Master Teachers understand that they must be in constant search of new and innovative ways to push their instruction forward. In the 21st century, education often demands cutting-edge technology be implemented into the daily classroom routine. As a result, teachers are presented with various means and methods of instruction that not only aid in the physical classroom itself, but also outside the brick-and-mortar walls of the school as well.

The challenge for Master Teachers becomes how to locate the proper materials in a vast sea of technological choices. In addition, the educator must then be trained on the facets of the system they wish to implement. The end goal is always to improve instruction and create an atmosphere where students can thrive in a blended learning environment.

The Flipped Classroom at Home

Another concept of a blended learning environment is a “flipped classroom.” This occurs when students not only engage in activities in the physical classroom but at home as well. Thanks to the development of 21st-century technology -- like the tools found in Acellus -- the ability for a “flipped” classroom to take place is more than readily available for teachers to utilize.

The use of technology in a flipped setting creates an opportunity for parents to engage in the learning process at home. When students are completing assignments outside of class, the use of digital lessons, videos, and materials allows the parents to have a better understanding of what is going on with their child’s educational experience. As a result, better communication takes place between the parent and the teacher on a more consistent basis -- the teacher, the parent, and the student are all on the same page.

In addition, the increased use of technology in the learning process allows teachers to keep better tabs on student performance outside the classroom walls. The technology found in Acellus allows for student performance to be scored instantly -- providing immediate feedback to the teacher on the strengths and weaknesses of each student. Furthermore, the educator can also see the actual time spent on each assignment -- locating possible holes in the learning process that are taking place. The result is a new level of accountability for the student with the understanding that help is provided in all learning settings -- be it at home or in a brick-and-mortar school.

Educating the Educators

As technology has begun to transform the classroom, teachers across the United States have expressed concerns about the distraction technology may cause. A 2021 study by the University of Kansas found that 70% of the educators surveyed felt new technology could become an issue in the learning process -- with 25% stating they felt intimidated by the students' knowledge of technology and different apps that were available.⁶

Likewise, a study was released in 2022 by Khon Kaen University that outlined the difficulty for teachers to have the needed technology knowledge that would enable them to integrate appropriate technology to foster higher-level thinking skills.⁷ The main issue, the study found, was the fact that teachers did not have the digital literacy to use in the design of lectures, managing classrooms, accessing information, and using applications for teaching.

There is no doubt that technology can be overwhelming at times -- especially in the learning process. Teachers are tasked with the responsibility of finding new ways to engage students, hold their interest, and have them master the content -- all while having to incorporate different learning systems into their classrooms. It can be a daunting task, to say the least. But, Master Teachers understand it is also part of their job to be the best versions of themselves and use the most up-to-date methods in their classrooms to prepare their students for the future.

⁶ "How Teaching With Technology Has Transformed Education," KU - The University of Kansas School of Education & Human Sciences, September 1, 2021.

⁷ Lan Thi Nguyen et al., "How teachers manage their classroom in the digital learning environment -- experiences from the University Smart Learning Project," *Heliyon* 8, No. 10 (2022), <https://doi.org/10.1016/j.heliyon.2022.e10817>

The great news is that Acellus not only aids in the process of helping students learn in new and exciting ways, but also helps the teachers by providing videos, lessons, assessments, and data in support. Even more, the educator tutorial lessons offered by Acellus keep the teacher up to date on new tools -- and how to use them. Acellus works like a coach for the teachers -- providing constant feedback and opportunities to understand and utilize the tools to best benefit the students they are responsible for each day.

By clicking on the “What’s New” tab on the Acellus Gold Active Teacher Interface, the educator is directed to the Roger Billings Acellus Blog for Educators. (Dr. Roger Billings is the president of Acellus.) Here, teachers can learn about upcoming courses and new features that will be added to the Acellus Learning System (see Figure 2.25).

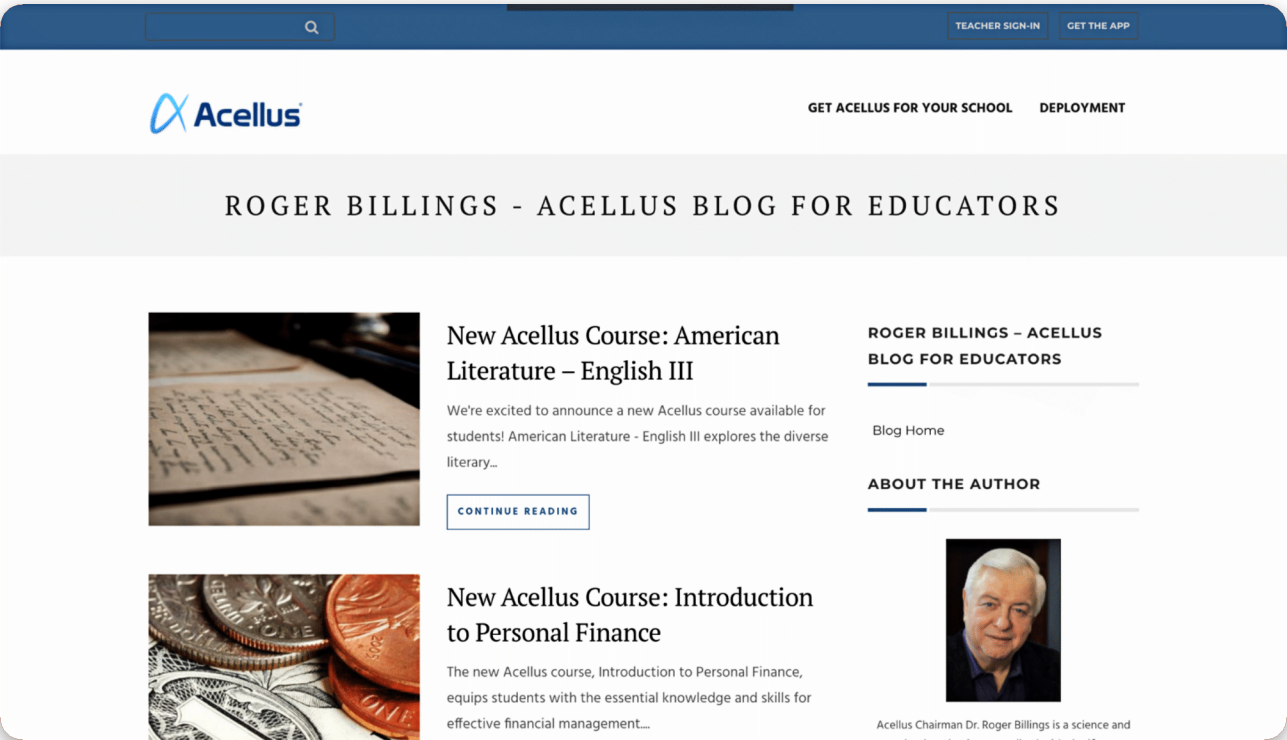


Figure 2.25: Dr. Roger Billings provides a blog specifically for educators to help keep them abreast of new courses and features. Many of the most useful features in Acellus Gold were suggested by teachers.

In *The Art of Teaching Over the Internet*, (2021) Dr. Billings described the challenges of 21st-century learning this way:

“The distance learning environment is new and challenging. Teachers must learn and master new methods and techniques for providing effective instruction to students. Students must develop skills of self-discipline and motivation to be able to be successful.”⁸

Dr. Billings continues,

“In spite of the challenges, effective distance learning programs allow students to move at their own pace and to get specialized help and support not previously available in conventional classroom settings. Especially in the case of very gifted or very challenged students, distance learning has been shown to be very effective in achieving positive student outcomes.”⁹

The Master Teacher's Classroom

Master Teachers understand that the classroom must evolve with the new digital tools that become available. The best learning environments are those that enable students to work to their strengths – and grow in ways that meet their abilities head-on. Classrooms that succeed are led by instructors who stay at the forefront of the best ways to reach students. Simply put, Master Teachers are lifelong learners willing to do whatever it takes to keep moving forward.

Teachers have the responsibility to be the best version of themselves for their students every year. When it comes to technological advancements, teachers need to stay at the forefront of the process – taking advantage of professional development and training seminars. Acellus works with the teachers to provide constant support. The system does not simply train teachers and then cut them loose to fend for themselves. On the contrary, Acellus constantly updates the teachers on new tools and advancements in the learning process.

Master Teachers entered the education profession because they have a passion for helping kids reach their full potential – and beyond! If one takes a moment to think back on the best teachers they have encountered in their lifetime, thoughts will quickly turn to the educators who turned learning into an adventure that was fulfilling, empowering, active, and yes – fun!

⁸ Roger Billings, “The Art of Teaching Over the Internet,” International Academy of Science, 2021, <https://www.rogerbillings.com/wp-content/uploads/The-Art-of-Teaching-Over-the-Internet.pdf>.

⁹ Billings, “The Art of Teaching.”

Often, the best teachers bring to life the subject they are instructing. The learning that takes place is not a process -- but a journey. Students show up in Master Teachers' classrooms excited about what the new day will bring -- understanding without words that the instructor has gone above and beyond to provide the best environment possible. A Master Teacher is someone who does not need to be told how important and awesome their responsibility is to the student -- they meet that responsibility head-on with enthusiasm and excitement each and every day. They are role models for other teachers to follow.

When it comes to embracing new challenges with technology, Master Teachers search out and participate in growing themselves. They take time to complete training and professional development to become the best version of themselves in the classroom -- not for the prestige, but for the kids that are their passion. Master Teachers use the latest technology tools to create a 21st-century learning environment that is constantly evolving. The end result is a classroom that is designed to give the students every advantage possible to grow and learn into the best versions of themselves. As that takes place, it is not only the students who grow, evolve, and become better -- but the Master Teacher as well.

2.5: Professional Development

The first order of business with any educator who is incorporating a new format into their classroom is understanding how the system operates -- and what role the teacher has in it. Without proper knowledge, the implementation of technological tools in the classroom can be lacking and ineffective. It is imperative that the training of the teachers using a new form of technology is instructive, informative, and purposeful.

The term "Professional Development" has been widely used in the educational community for the past several decades. Teachers attend "PD" to better understand new methods and tools of instruction. Often, however, educational PD is listened to during the presentation, and forgotten once the session is over. Teachers exit the sessions with a lack of understanding of exactly how to incorporate the new method or technology into their everyday classroom routine.

If teachers see professional development, or technology tools, as a "drag" or difficult to grasp, they more often than not will revert to their old methods of

instruction (Baba, 2014)¹⁰. The Khon Kaen University Smart Learning Project is an example of attempting to aid teachers in the development of innovative ways to manage classroom technology in a manner that fosters a new type of learning environment.¹¹ Teachers in this system are aided by designed lessons, methods, and tools to assist in the transformation of the classroom into a comfortable space for both the teachers and students.¹² The main drawback to the system was once again finding the time and means to properly train educators in digital literacy.

Furthermore, teachers need to feel a sense of accomplishment, mastery, and empowerment when it comes to the methods they will incorporate into their classrooms and teaching style. The past has shown that emotionally exhausted teachers who feel a detachment from their abilities to reach their students and have a feeling of reduced personal accomplishment will risk being “burned out” of the profession early in their careers.¹³ In addition, the post-COVID world of teaching saw many educators feel a growing dissatisfaction with being able to do what their job demands.¹⁴ The key is to provide not just professional development for teachers – but meaningful opportunities to enable educators to take the lead in the development and implementation of new strategies and tools that breed success in the classroom.

Acellus offers the proper training and professional development for teachers new to the system. Teachers are offered a series of different tutorials that specifically help them understand how to use the Acellus Gold system in their classroom. Each “lesson” consists of a video that is anywhere from 3-15 minutes in length (see Figure 2.26). The educator truly becomes the student as they are immersed in how Acellus enhances the educational opportunities for their students. All the while, the tutorials walk the educators through each step of the process – from the setup of the system to the end of the school year.

The Acellus Gold tutorial topics include the following:

¹⁰ Baba, “Technology in the Classroom.”

¹¹ Lan Thi Nguyen et al., “How teachers manage their classroom.”

¹² Nguyen, 2022.

¹³ Maya Bitsadze and Marine Japaridze, “Personal and Social Aspects of Teacher Burnout in Georgia,” *Problems of Education in the 21st Century*, 59, pgs. 7-14, April (2014), doi:<https://doi.org/10.33225/pec/14.59.07>.

¹⁴ Tim Walker, “Getting Serious About Teacher Burnout,” *neaToday*, November, 2021, <https://www.nea.org/nea-today/all-news-articles/getting-serious-about-teacher-burnout>.

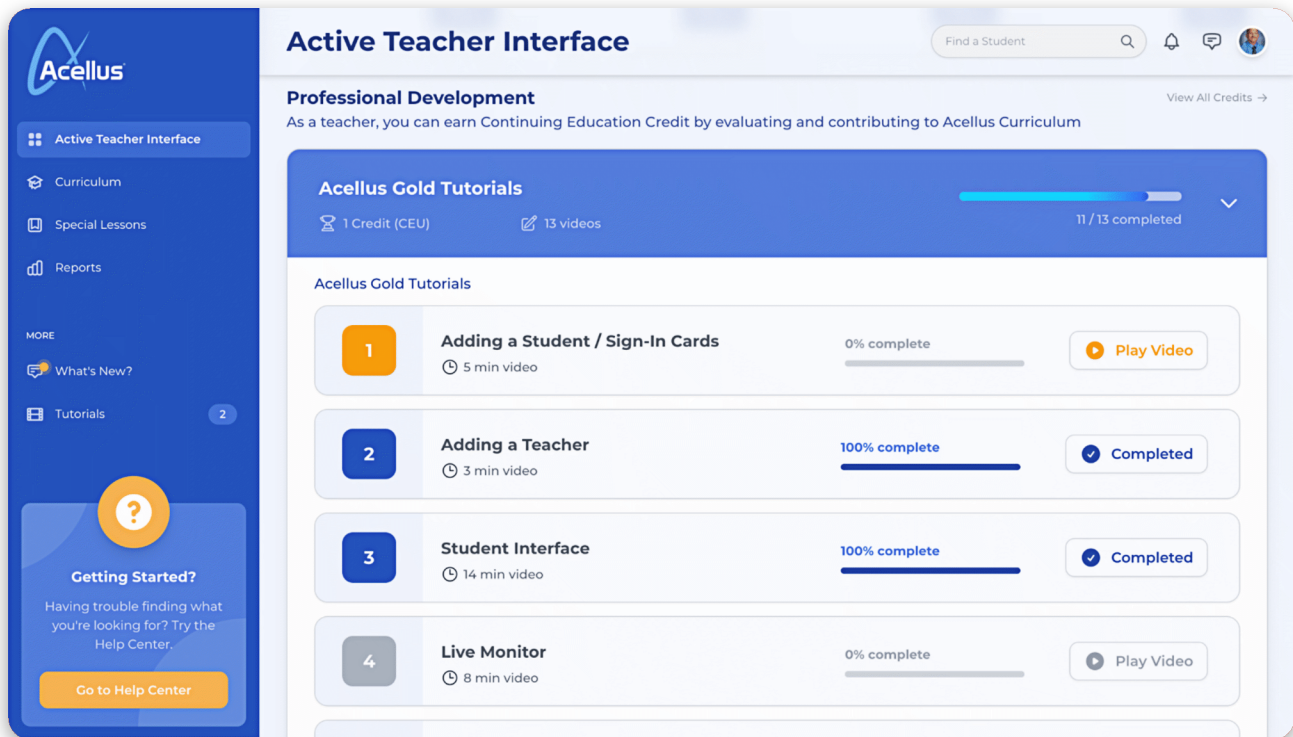
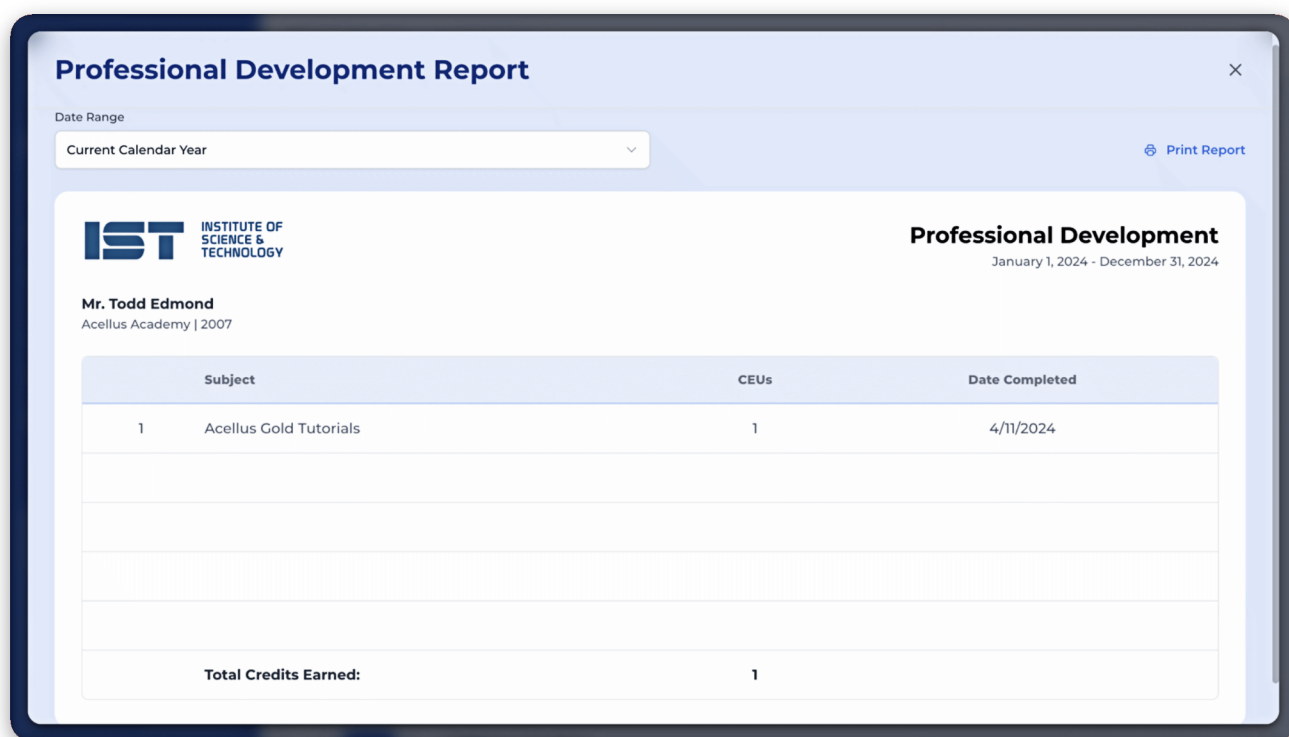


Figure 2.26: Tutorials provided within the Active Teacher Interface give teachers a good start using the Acellus Gold System.

- Adding a Student/Sign-in Cards (5 minutes)
- Adding a Teacher (3 minutes)
- Student Interface (14 minutes)
- Live Monitor (7 minutes)
- Vectored Instruction (4 minutes)
- Report Card (3 minutes)
- Student Account/Course Enrollment (6)
- Reports (2 min)
- School Settings (5 min)
- Bulk Course Enrollment (3 min)
- Year-End Functions (4 min)
- Live Messaging System (5 minutes)
- Parent Interface (3 min)

Each tutorial lesson helps to prepare the classroom teacher for an essential function that the Acellus Gold system has to offer. The lessons are designed to educate



In addition to the tutorials, Acellus Gold also offers another way for classroom teachers to get hands-on with improving the system itself. “Lesson Evaluations” provide educators using Acellus in their classrooms the opportunity to review individual lessons and offer suggestions for additional ways the lesson can be enhanced (see Figure 2.28). The task requires the teacher to watch a video for a particular lesson in their specific subject area. After viewing the lesson, the teacher then responds with one of the five following options:

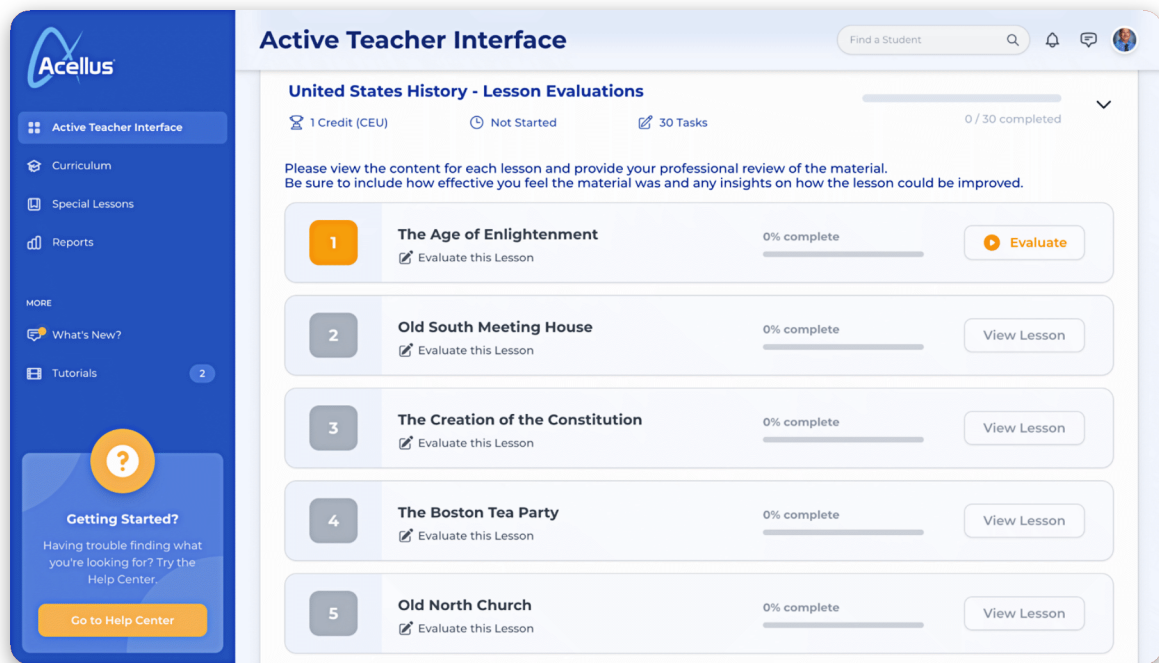


Figure 2.28: Teachers can evaluate Acellus lessons, including both videos and assessment items, and provide feedback for improving the system, thus earning additional CEUs.

1. “No issues identified”
2. “Typo, or incorrect information in the video”
3. “Video is hard to understand”
4. “Video is not engaging”
5. “Closed caption issue”
6. “Other”

A feedback box is then available for the teacher to further explain any issues or suggestions on how to specifically improve the lesson (see Figure 2.29). Once again, the teacher is empowered by Acellus to become a partner in the implementation of the actual lessons themselves. At the same time, the teacher also gets to review the concepts taught in the Acellus lessons, which allows a better understanding of the curriculum.

The Age of Enlightenment

1

2

3

4

5

6

7

8

9

10



Select an Option

No issues identified

Other

Closed Caption Issue

Video is not engaging

Video is hard to understand

Submit

Figure 2.29: Response options are provided for teachers who are reviewing Acellus course videos such as this Geography lesson taught by Susanne Mitko. Continuing Ed credits are awarded when a teacher has reviewed a specified number of lessons.

While reviewing the lesson videos, the teacher also has access to the review assessment questions as well. Review questions are asked in each Acellus lesson as a measurement of the mastery of the concept by the student. Response data is recorded and instantly becomes available for both the student and the teacher. By having advanced access to these questions, the educator is once again empowered to offer suggestions to Acellus on ways to improve instruction -- while furthering their understanding of the curriculum.

Additionally, as with the Acellus Gold tutorials, educators can earn CEU credits through the completion of lesson evaluations. One CEU credit is awarded from IST for every 30 lesson evaluations that are completed and submitted. This cutting-edge opportunity not only rewards responsible teachers who take the time to understand what is being assigned to their students but also vaults educators forward with the use of technology in creating a blended, 21st-century classroom.

Proper professional development is paramount to the success of any educational platform or program. Teachers need to feel a sense of mastery over the methods that are used each day in their classrooms. Often, teachers who engage in hands-on, meaningful professional development activities will feel energized to incorporate the new tool into their pedagogy. In addition, teachers who are rewarded for their efforts (CEU credits) feel a sense of worth and accomplishment for their efforts.

Acellus offers teachers the rare opportunity to not only use the platform to enhance learning but to also become a Master Teacher in the system – a teacher that has a hands-on role in the development and improvement of the lessons themselves. Acellus Gold welcomes and encourages input from educators who are engaged in utilizing the system in the classroom. With these teachers offering their suggestions and improvements, the result is an Acellus learning platform that is in a state of continual enhancement. This state-of-the-art approach to professional development immerses educators with knowledge useful to their classroom instruction instantaneously. With everyone on the same page, Acellus Gold itself is a living, breathing system that is in a perpetual state of advancement. In the end, everyone involved wins.

Chapter 3:

THE ART OF TEACHING WITH ACELLUS GOLD

“The art of teaching is the art of assisting discovery.” -- Mark Van Doren

To this point in the book, we have taken a long look at the impact teachers have each and every day in the classroom. In addition, we have discovered the “Science of Learning” with the technology features of Acellus Gold. Now, we combine the two methodologies of education to create the “Art of Teaching.”

This chapter dives into the new world of 21st-century education. We begin to grasp the concepts behind the way the technology offered by Acellus Gold has transformed the traditional classroom. With the tools of the Acellus Gold Live Teacher Interface, you will be empowered to impact the lives of students in ways not possible in the past.

Finally, we will visualize what the 21st-century classroom looks like for everyone involved, from the ability of students to take control of their learning, to teachers who can individualize instruction like never before. The “Art of Teaching” transforms the classroom into an interactive place where students can achieve at high levels, and teachers become Rock Stars!

3.1: The Role of Educators in the 21st Century

Picture a classroom from a century ago. Students are sitting in a classroom at their desks. The desks are in rows all facing the front of the classroom. The teacher’s desk is located in the front of the room, as is the chalkboard. Students use individual textbooks to follow along as the teacher goes through lessons from the curriculum using the chalkboard to guide instruction. The textbook, along with the

teacher, serves as the main source of all information. Students sit quietly as they struggle to keep up with the teacher-led classroom.

We've all been a part of a classroom that looks like the one described above. For decades in the United States, education has been a teacher-led endeavor, one where the instructor is the lone source of all information. Before the massive influx of technology in the late 20th and early 21st centuries, schools had no choice but to provide direct instruction that often relied solely on the level of knowledge the classroom teacher possessed.



Figure 3.1: Students using Acellus eLearning Pods demonstrate that even with computers that are locked down to only allow access to Acellus courses, technology gives students – and teachers – the ability to obtain information very quickly. The teacher and the textbook are no longer the sole sources of knowledge.

Today, however, the traditional classroom setting is in the past. Technological tools allow the world to be at the fingertips of the students in the classroom. The information available to students – and staff – is unprecedented in the history of education (see Figure 3.1). Suddenly, all subjects can be researched at a depth of knowledge not possible decades ago. The possibilities technology provides are truly endless.

One factor, however, with all this technology is understanding how to harness it.

There is a case to be made that too much information can lead students to become so frustrated that they cannot distinguish fact from fiction. Simply turning students loose on the internet is not a wise choice in any educational setting.

The Acellus Learning System allows students, teachers, administrators, and parents to have confidence in the material being presented and learned. Video lessons and diagnostic checks include key information students need in order to succeed in each course. As a result, the thought of students simply searching all corners of the internet for this information is eliminated.

Simply put, Acellus Gold is a learning accelerator. Students are empowered to take ownership of their own education by working to stay on task and on grade level. The question then becomes: *What is the role of the teacher in the Acellus Gold classroom?* For many educators, the thought of giving up “control” of their classroom creates real concern for what exactly their role will be in the process. There is no doubt that the 21st-century classroom is one in which the purpose of the teacher has been redefined. As we will see, however, it does not mean the teacher is no longer important. Quite the contrary; great teachers (Rock Stars) are needed now more than ever before.

3.2: Acellus Gold: Tools that Empower Educators

As with any piece of technology, classroom teachers want to know what it can do for them. Be it from assisting with daily classroom tasks, grading assignments, or creating new ways to deliver the information, Master teachers are always looking for new ways to push their classroom, and the learning process, forward. When a teacher sits down at the Acellus Gold interface, the 21st century classroom is at their fingertips.

The first essential piece for any teacher using Acellus Gold is to understand how the grade levels are divided. The platform the students will be accessing will change as they get older, and teachers need to be aware of how it is divided. Acellus Gold is presented in three different platforms as follows:

- Elementary = PreK through Grade 3 (see Figure 3.2)
- Middle School = Grade 4 through Grade 8 (see Figure 3.3)
- High School = Grade 9 through Grade 12 (see Figure 3.4)

As the student advances to different grade levels, the format in which they are presented

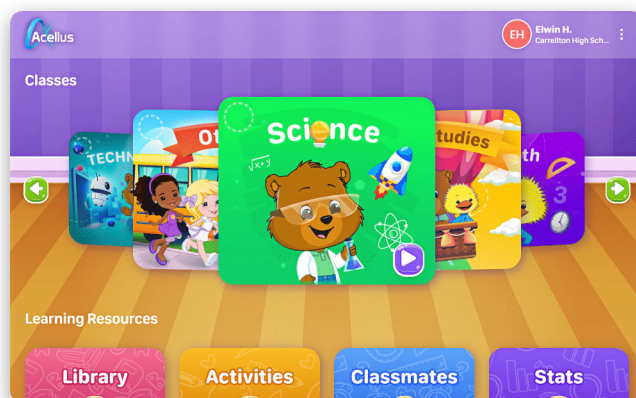


Figure 3.2: The student interface for Elementary School students is bright and colorful, and is designed to help keep students' attention on their studies in a fun way.



Figure 3.3: The student interface for Middle School students presents a more mature theme.



Figure 3.4: The student interface for High School students provides increased data and options for students who are preparing to enter the adult world.



Figure 3.5: Students are introduced to Acellus Gold Credits in their orientation video, preparing them to immediately begin focusing on the value of their education.

courses in Acellus Gold will change. The first task for any teacher using Acellus Gold is to familiarize themselves with their grade level's platform. This is paramount in understanding what their students will see each day they use the system.

Tool #1: Motivation -- Earning Gold!

Every teacher wants their students to be excited and motivated to learn. Master teachers are always on the lookout for ways in which they can reward students for a job well done. The Acellus Gold learning platform is no different. One key feature at all grade levels in Acellus is the actual earning of gold credits by the students (see Figure 3.5).

Acellus, like all teachers, believes that when a student gains knowledge that knowledge has real value. When a student is motivated to do their best magical learning can

happen. As a result, the reward that is given each time a student accomplishes a learning task is literally GOLD! These gold credits accumulate in the student's individual account and can be spent at the Acellus Store to purchase items like hoodies, pencils, rings and hats. Teachers can monitor a student's earned gold credits by simply clicking on their name on the Acellus Gold interface.

The earning of gold credits, however, is not simply for fulfilling the daily task set out by the Acellus Gold lesson. When students turn in their work, they are encouraged by the learning platform to go further -- and improve their score. An example

would come from a student completing an assignment in the Writing Tutor tool of Acellus (*which will be discussed further later in this chapter*). When the student completes their writing and receives a grade, the Writing Tutor tool gives them suggestions to improve their work and earn extra credit by going above and beyond grade level. Upon revising their work, students earn additional gold credits for wanting to simply be better than just a passing score.

Additionally, gold credits are earned with each daily lesson the student successfully accomplishes. When they complete their goals for the day, students unlock additional Learning Activities where even more gold can be accumulated. These learning activities are meant to reinforce concepts while also fostering educational enjoyment with games such as Type Quest (keyboarding) and Circuit Laboratory (electronics). Students of all grade levels can also access a Learning Activity called Write A Book -- which enables them to create stories with the help of A.I. suggestions and save those stories to their accounts. All the while, students are earning gold for gaining knowledge and learning!

The motivation of earning gold credits enables the student to take pride in their work. The rewards of being able to “go shopping” for Acellus gear allows the student, and the teacher, to celebrate the educational success and growth that is taking place. If there is one facet of education that each teacher strives for it is to make each student feel value for not only their work, but for themselves as well. The concept of awarding students gold allows for a pride to develop that attaches itself to the learning process -- and everyone wins as a result!

Tool #2: The Writing Tutor

As previously mentioned earlier in this book, time is the number-one issue every teacher has on their mind from the start of the school year. Teachers need time to create assignments as well as time to grade them. When it comes to an item that often takes up a great deal of time for educators everywhere it is writing. From essay responses to full-blown research papers, writing often is one aspect of teaching that is both essential and draining at the same time.

One very important tool for teachers using the Acellus Gold system is the Writing Tutor. Here teachers are able to use assignments that have already been created by Acellus. Once the writing assignment has been accessed by the student in the

course, the Master Teacher can see the progress each student has made -- *in real time* -- in the system. Assignments are embedded into the course the students are taking -- thus making them active when the student reaches that step of the course.

When the student accesses the writing lesson the first thing that happens is an introduction video explaining what Writing Tutor is, and how the student will use it (another time saver for teachers). When the student is ready to write, the Writing Tutor offers real-time feedback to improve the grammar, spelling and formatting of their work. This invaluable tool helps students understand how to make their writing better while it is actually taking place.

Once the writing has been submitted, the Acellus system instantly grades the work. The student receives immediate feedback on how they scored. The days of teachers having to take dozens of writing assignments home to grade, and the students waiting a good deal of time to see how they did, are long gone. Now, both the teacher and the student get real-time feedback while the assignment is fresh in their minds.

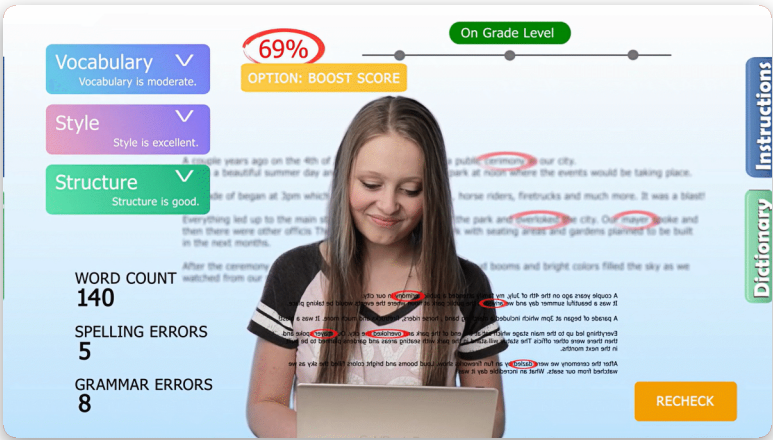


Figure 3.6: Writing Tutor provides suggestions for improving the vocabulary, style, and structure of each piece – if the students want it. With the help available, scores over 100% are not uncommon.

The Writing Tutor not only gives the student a grade, but offers suggestions on how to improve the grade even further (see Figure 3.6). Students can access the dictionary to improve word choice as well as grammar tools to rise above the grade level in which they are currently writing. All the while, the Writing Tutor gives suggestions for improvement, but it is up to the student to actively do the alterations in their own words. As mentioned previously, the students then can earn Acellus gold for going above and beyond their completed first draft.

The time that is saved for everyone involved allows for greater learning to take place by helping the students improve immediately -- rather than waiting days, or longer, for the writing assignment to be handed back. Meanwhile, the Master Teacher has more time on their hands to help the kids they teach first-hand.

Tool #3: The Success Zone

It goes without saying that every teacher wants their students to succeed. Not only do the teachers themselves want it, but they want their students to feel it as well. Success breeds more success -- and the education profession is in the business of helping students succeed at levels beyond that which they thought possible.

The Acellus Gold system has created a concept known as the “Success Zone.” This is where a student is showing proficiency at a 70% success rate, or above. The Live Monitor for teachers using Acellus Gold contains a feature showing what percent of your class is in the “Success Zone.” Once again, Acellus Gold provides instant feedback and data for teachers to use in order to help students who are struggling and in need of support.

When a student is achieving at a high level, the Acellus Gold system can launch them forward in the “Honors” mode. This provides more comprehensive lessons and increased rigor for advanced students who benefit from greater academic challenges. Assessments at this level of success may be different from the “Default” mode the courses start in. Additional lessons are also designed to challenge and prepare students, achieving at high levels, to reach their full potential in the Success Zone.

For struggling students, however, who may not be reaching the Success Zone, the Acellus system may place them in the “Tuned-Learning” mode. Here, students having difficulty get extra accommodations to assist them in getting back on track. This involves a more step-by-step approach that could include Vectored Instruction. The goal is to help the student get “unstuck” and back on grade level while reaching the Success Zone. This is especially true for students who are a part of Special Education programs (*which will be discussed further in this chapter*). These students, when entered into Tuned Learning, are allowed to slow the pace and gain key knowledge that may have eluded them in the past. After Vectored Instruc-

tion has been utilized, they are then caught up with their peers at the same grade level.

As discussed in Chapter 2, Deficiency Diagnostics, when paired with Vectored Instruction allows students to achieve and stay on-schedule to complete their work with mastery. It goes to the heart of the learning gap by addressing essential knowledge over trivial facts. The Deficiency Diagnostics identifies the specific piece of the foundational knowledge the student is missing for that specific lesson or concept. Without that essential building block, the new required concept can not be fully understood or grasped by the student. In essence, this is something that previous “Chalk-and-Talk” methods of education could not make possible in real-time.

Once the learning deficiency has been identified, the core concept that is needed by the student to move ahead with the learning is handled by the triggering of Vectored Instruction (see Figure 3.7). The Acellus system uses the tool to deliver targeted interventions at the precise intensity needed to repair the learning deficit. Some students simply need one specific step, while others may need several. The key is each student in Vectored Instruction has their foundational knowledge rebuilt in a way that tailors to what they need – and gets them back into the Success Zone.

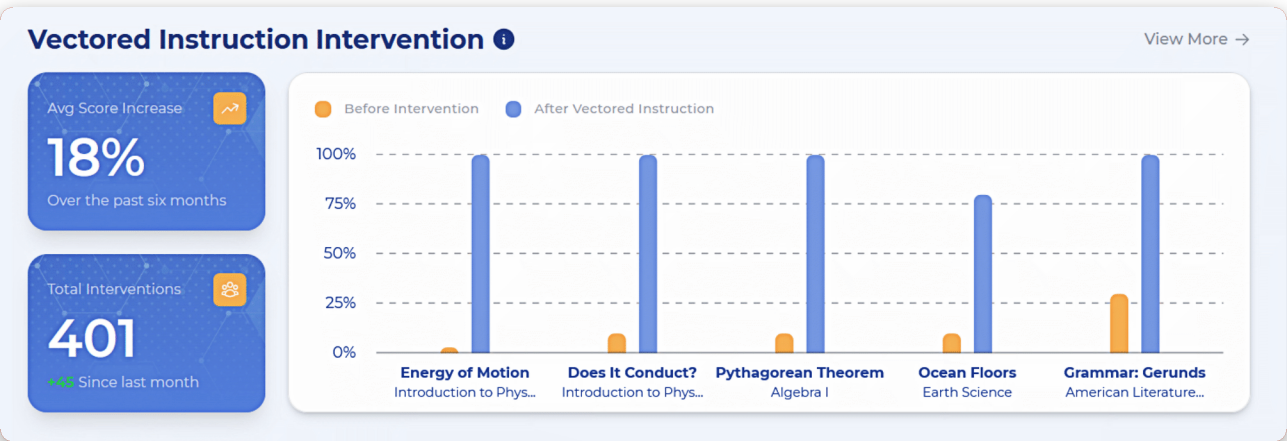


Figure 3.7: Teachers can easily see recent results from Vectored Instruction on the Acellus Teacher Interface, below the Live Monitor. Selecting View More brings up a complete list of students who have been helped by Vectored Instruction, with access to their records provided.

Meanwhile, the classroom teacher is not only able to monitor the students in need of assistance who are outside the Success Zone, but they can also tailor the course individually to help students reach their goals. The teacher, via the Live Monitor, has the ability to enable both “Tuned-Learning” (for those struggling) and “Honors” (for those on an advanced level) modes of instruction. The teacher is empowered by the Acellus system to challenge students achieving at an advanced level, while helping those who may be struggling with a concept – all instantly and in real-time. In the end, the goal is to get 100% of the class into the Student Success Zone.

(One vital aspect of the Acellus Learning System is the fact that data is constantly being collected and analyzed. Deficiency Diagnostics identifies specific gaps in foundational knowledge - and then passes that information on to the Vectored Instruction intervention to assist the students. All the while, the Courseware Development team uses the data collected from each lesson to make the course better than it was before. As a result, Acellus lessons, and the courses themselves, are in a constant state of improvement due to the data collected from Deficiency Diagnostics and Vectored Instruction.)

Tool #4: The Acellus Gold Advantage Program

The use of technology in the 21st century classroom has created the ability for students to engage and learn outside the traditional “brick-and-mortar” walls of the schoolhouse. Today students can take their lessons just about anywhere and complete assignments at almost any time of the day or night. For the classroom teacher, this creates a new problem – how to balance personal downtime with students who need assistance outside of normal school hours.

Thankfully for educators the Acellus Gold Advantage Program provides support and teamwork so students can achieve at high levels even when their classroom teacher is not online (see Figure 3.8). Embedded teachers monitor, support, and intervene when a student shows signs of struggle. They collaborate with the classroom teacher of record in a digital partnership of support. With access to all interactions that have taken place, the classroom teacher works in partnership with the Embedded Teacher to create an environment of support for the students.

When a student begins to struggle outside the brick-and-mortar classroom environment, the Acellus system provides feedback and encouragement. The partner-



Figure 3.8: The Acellus Gold Advantage Program “backs up” teachers so that students get help whenever they need it – even when they’re working at home during off-school hours.

ship with the teacher is enhanced with all communication stored on the student’s individual account. The classroom teacher, when active, can see the intervention offered by the Acellus support team (which is time-stamped and marked as to which lesson the student needed assistance with).

In essence, the Acellus Gold Advantage Program means the student is never alone. Additionally, the classroom teacher is likewise always supported! The collaboration between the Acellus system and the classroom teacher creates a 21st-century

learning team that exists to provide a partnership in education with the goal of never having a student feel stuck or alone while attempting to gain knowledge. This tool allows the classroom teacher to never miss a beat on student development happening outside the normal course of a school day. 21st-century technology allows for learning to take place outside of the physical school setting. In today’s educational world, the student has the ability to continue their analysis, research, and inquiry beyond the normal time sitting in a classroom. The result is a new era of education where learning never stops, and students are supported at all times.

Tool #5: Live Messaging & Video Conferencing

One aspect of teaching is the almost constant need for interventions and support for students who are struggling. In the past, teachers had to find ways to monitor learning and find the nuances and gaps that were missing on their own. This was often done with pre-and-post testing or the concept of items like “exit tickets.” Countless hours would be spent by the teacher outside of learning attempting to address issues students were having with the material.

Today, teachers using Acellus Gold not only have instant feedback of which students are struggling, but immediate ways in which they can assist learning and pro-

vide encouragement. One such tool is the Live Messaging feature teachers can use to communicate in real-time with a student.

Live Messaging can be used when the Acellus Gold system has alerted the teacher (*student card appearing with a red color*) to an issue the student is having with a specific step, or even a specific question. When the teacher clicks on the individual student who is struggling, data will be used to help determine the cause of the issue. The Acellus system then provides a template response that the teacher may consider based on an analysis of student engagement observed. The teacher's response is then created to address that specific issue.

For instance, if the Acellus system has determined the student is “guessing,” it will alert the classroom teacher. When the teacher goes to the Live Messaging feature, Acellus will provide an option of sending the student a pre-recorded “don’t guess” video that, when sent, will immediately be played for the student along with a visible message from the teacher. The teacher, meanwhile, can dig in and see exactly what the student has accomplished thus far, providing answers to questions such as the following:

- Has the student used all of the resources available to them (*Video B; Help Video; Textbook*)?
- How much time has the student spent on the lesson?
- Have they finished the lesson?

The teacher obtains answers to all of these questions simply by looking at the individual student’s record BEFORE responding via the Live Messaging system. The key is to determine the underlying issue with the student, not to teach the student via messages. The teacher can send a template response provided by the Acellus system, or they can create a custom response themselves. (*Note: It is advisable that teachers do not tutor the students during live messaging. Address the issue the student is having and encourage them to move forward. The messaging feature should not be used to reteach information.*)

All communication is then stored in the student’s individual account -- so other members of the learning team can see what interventions have been used. The result is a team approach to addressing the specific reason a particular student is either struggling, or asking for support. (*It should be noted that as stated earlier, if*

a student is in need of support when the classroom teacher is off “the clock,” the Acellus Gold Advantage Program will aid in messaging -- with all communications being stored and visible in the individual student account.)

Teachers who access the video conference can do so in a couple of different ways. The teacher is alerted to a struggling student wishing to do a video conference when a notification pops up on the Live Class Monitor. The teacher can then click the video icon with that student and immediately begin to communicate.

When this occurs, the teacher has the option to address the issue right away and help the student progress. This is especially true if the problem is more technological than pedagogical. The key for the teacher is to help the student solve the issue and move on. If, however, the issue stems from a conceptual problem with course content, the teacher may decide to request the Acellus team to create a Help Video, which could be used by future students who are having difficulty with the same concept.

A Help Video addresses a core concept that may be misunderstood by students of a particular lesson, or a specific question or problem within the lesson. If the teacher realizes that there is a conceptual issue, they can request a Help Video be created by the Acellus courseware development team to address the conceptual issue the student is having. The bonus for the teacher in this example is that once the Help Video has been created, it then exists in the Acellus system for ANY student to access when having the same issue. Once again, time is saved for the

teacher by being able to address a problem across the board, from being instantly alerted to it by a struggling student.

The key to using the Live Messaging or Video Conference features (see Figure 3.9) offered by Acellus Gold is to remember three important factors in communication:

1. What has the data shown is the issue with the student’s learning?

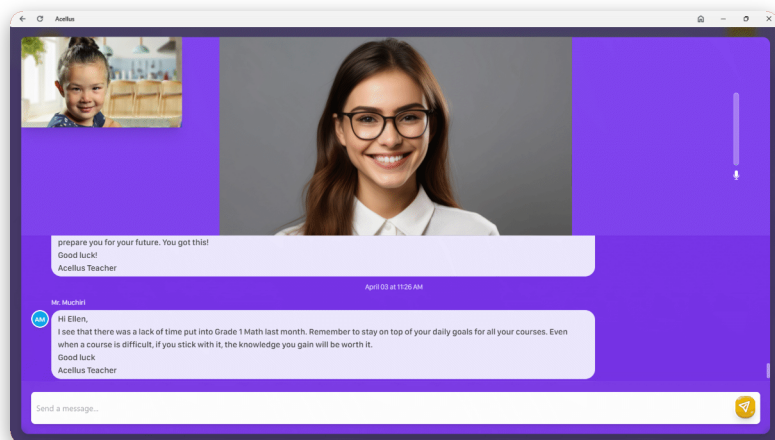


Figure 3.9: Video chat should be used sparingly, and never for tutoring. It is helpful for ascertaining the exact issue, as well as for encouragement.

2. What is the student requesting that is in need of support?
3. Work on the issue the student is having -- Do not tutor -- Encourage.

When a teacher is able to direct the student to the resources they need, everyone wins. The student is empowered to move forward with their learning, while the teacher is empowered to help the student with the tools to succeed – all happening in real-time.

Tool #6: SPED X (Special Education Excellence)

One of the larger tasks that has faced education in recent memory is the creation, reporting, and maintaining of Individual Education Plans (IEPs) for students. Often-times it can become a daunting task for both educators and school districts themselves. Countless hours are spent meeting with the individual student (*and parents*), creating the IEP, and then monitoring the progress of the plan itself. All the while, state governments require all progress to be reported.

The Acellus Gold system helps school districts and teachers create and subsequently maintain the IEP - saving valuable time. Teachers provide student details to create a new IEP within the SPED X (see Figure 3.10). This includes the selection of applicable academic goals to be included in ongoing reporting. The IEP is then aligned to state standards and is ready for implementation. In addition, the tools of Acellus foster learning activities that keep the students on an IEP moving forward and achieving grade-level goals. This is especially true of students who are placed in the Tuned Learning Mode, where the most critical concepts of the course are prioritized to enable deeper learning for greater success. While working in their course, Deficiency Diagnostics identifies knowledge gaps and triggers Vectored Instruction to help the students maintain coursework that will keep them on pace and moving forward with their peers.

Whatever mode a student is in, their mastery towards specific goals, including work product and interventions, is automatically documented and articulated in the IEP. All the while, the student is empowered to maintain alignment with their current grade level and narrows the learning curve with their peers. Most importantly, this can be done using full inclusion in regular education classrooms - there is no need for a specialized course or separate classroom, enabling schools to provide the Least Restrictive Environment (LRE) to students.

The screenshot displays the 'SpED Plan' tool interface. At the top, the user 'Tammi Carter' is logged in with '60 - Gold Learning Credits'. The sidebar on the left lists navigation options: Courses, Profile, Parent Access, Reports, and SpED Plan (which is currently selected). The main content area is titled 'Student Information / Eligibility' and includes the instruction 'Please enter student's IEP details below.' The form contains several input fields: 'IEP Date' (mm/dd/yyyy), 'Original SpEd Entry Date' (mm/dd/yyyy), 'Next Annual Plan Review' (mm/dd/yyyy), 'Last Re-evaluation' (mm/dd/yyyy), and 'Next Re-evaluation' (mm/dd/yyyy). There are also dropdown menus for 'Meeting Type' (Select a Type), 'Additional Purpose of Meeting (Optional)' (None), 'Referring Party (Optional)' (Select One), 'Special Education Plan Type' (Select One), and 'This plan is:' (Select One). A 'Continue' button is located at the bottom right of the form.

Figure 3.10: The SpED Plan tool guides teachers through the process of compiling the necessary information to create an IEP. Once this information is compiled, the tool automatically creates a printable IEP and updates it as the student works. The IEP can also be submitted electronically, saving additional time. To access the SpED Plan tool, on the Student Profile, under Statistical Data, set the Education Program to Special Education. Select the additional menu item – SpED Plan – which now appears at the top of the page.

Progress can be monitored by the Acellus team (system tools and classroom educator) on a daily basis. Goals set forth in the IEP are automatically monitored and updated by the Acellus system, with both teachers and parents having instant access. When the time comes for the state to collect its data, the report is built into the Acellus system and can be generated instantly. In addition, the generated IEP will automatically include work product examples and documentation of all interventions that have been implemented for the student.

Once again, time is saved for the educators in the classroom. By using the 21st-century technology of Acellus Gold, students in need of an IEP can be instantly directed to the help they need while being able to stay in a regular classroom and in alignment with their peers. The ability for the classroom teacher to embed the IEP into the Acellus learning platform accurate documentation is kept, automatically, as the student progresses forward meeting learning goals in their course of study.

Tool #7: Generating Reports

Master teachers have always held the desire to know exactly how their students are grasping the material they are presenting. There is a built-in need for teachers to understand how not only to assist in helping students through the problems they are having, but also to celebrate the successes they are enjoying as well. The Acellus Gold platform provides teachers with the tools to access data and information a 21st-century classroom requires.

Student work completed is available directly on each individual account. Graphs of daily goal completion, time stamps, instant scores, and access to the communication log are all at the fingertips of classroom teachers. The guesswork has been removed and replaced with technology that allows educators to see up-close (individual students) as well as the big picture (compare students to national data).

As a result, reports can be generated using the Acellus system that show student achievement data. Teachers can assess how their students have mastered each learning benchmark and perform on those assessments at the state or national level. Likewise, a Course Score Summary (most common report pulled by teachers) breaks down the following steps for each student:

- Course title
- Course score, letter grade, time spent, attendance, mid-term exam score, final exam score
- Teacher contact log (communication with student)
- Seat time (time spent per day)
- Student hours by date (time on task)

The Acellus Gold system generates the report instantly and allows the classroom teacher access to data and information that can be used to find not only gaps and issues that may exist, but also the successes that have occurred in the classroom as well. *(It should be noted that classroom teachers can watch tutorials on the Acellus interface that provide additional information and training of how to create and download class reports.)*

Once the teacher gathers the data and information from the Acellus system, they can customize and alter student accounts to best fit their needs. For example, a teacher who sees a particular student struggling with completing their weekly

goals can go into that account and adjust the number required. Additionally, teachers using the data can also place a student in the Honors or Tuned-Learning mode depending on what is specifically needed for that child. The teacher, working together with the tools of Acellus, creates opportunities for learning that were simply not possible in the past. *(While teachers have the option of moving students forward or backward in a course, this is often not the best course of action. Often, when the teacher moves the student ahead in the course when they are not ready, it is counterproductive to what Vectored Instruction is meant to do - promote mastery of the concept. The teacher needs to let the intervention from the Acellus system manage the course position for the student. Therefore, the teacher should let Vectored Instruction do its job when triggered.)*

In the end, the tools of Acellus Gold not only create a learning atmosphere where students can achieve to the best of their capabilities, but they¹ also allow the teachers to be the best versions of themselves as well. The tools of Acellus create a team that is focused on the goal of encouraging students to be more than they ever thought possible. All the while, teachers can let go of aimless hours of grading and planning and get back to the task at hand for all educators -- helping kids learn and grow.

3.3: The Success Zone Model

“The role of a teacher is to facilitate learning.” -- Ken Robinson

One of the goals of any teacher is to keep students actively engaged and on-task during the learning process. Master teachers understand that there is no one set way for students to learn. Instead, a wide variety of different methods should be used to not only reach all learners, but also keep the classroom alive. Acellus Gold works as a partnership with the teacher to create an atmosphere where every student can achieve success.

The concept of an Acellus Gold classroom can best be described as a “Success Zone Model.” If you can envision a daily lesson taking a total of one hour (60 minutes), the tasks set before the students can be broken down into two integral parts. When working in unison, the entire learning experience involves technology, personal interaction between the teacher and student, social interaction between students themselves, and success.

Part I: Accelerated Learning

The first part of the lesson (*40 minutes, for example*) is “Accelerated Learning.” This involves the students working with the Acellus Gold system and accessing the lessons and assessments for that specific day. During this time, students engage in the Acellus video lesson as well as the assessments that follow. Students who complete the goals quickly will then activate Learning Activities that keep them engaged (*TypeQuest, Write a Book, STEM Activities, etc.*). Meanwhile, those students who take longer with the daily lesson have the time they need to receive special support from the classroom teacher. All the while, the learning never stops.

During the Accelerated Learning portion of class, the Master Teacher serves as a facilitator who is actively engaged in assisting students who may be struggling to grasp a specific concept in the lesson. Through the Live Monitor, the teacher can automatically see which students are doing well (*Green Card*) and those who need immediate intervention (*Red Card*). In real time, the teacher can both celebrate (*shoot confetti*) with those who pass the lesson assessment, and assist (*quick note of encouragement*) those who may be in need of intervention.

For those students in need of additional help in the classroom, the teacher is right there to assist them. The Acellus Gold system allows the teacher to work one-on-one with individual students who are having difficulty with the day’s lesson. The system gives instant feedback to the classroom teacher that specific students need their help. This automatic data has not been possible in classrooms of the past -- where teachers had to sit and grade papers in order to understand which students were grasping concepts and which were not. During the Accelerated Learning portion of a daily lesson, the classroom teacher is able to immediately help the students who need it by using the Live Monitor.

The tools, however, are not limited to classroom walls during Accelerated Learning. If students are working remotely, the Live Monitor serves in the same fashion, alerting the teacher to which students have successfully completed the lesson objectives and those who are struggling. Instead of getting up and walking over to the student who needs help (*classroom setting*), the teacher has a variety of methods to reach out to a student having issues and assist them. From simply shaking their screen due to inactivity, to sending a quick note of encouragement, to messaging the parents if needed, teachers using Acellus Gold have options available to aid in helping struggling students achieve their daily goals.

Once the daily goal has been reached by each student in the classroom, the second portion of the lesson begins. This is where the Art of Teaching brings the classroom to life with interaction, investigation, inquiry and fun! The teacher becomes the Rock Star of learning by bringing students together for hands-on activities that tie directly back to the Acellus Gold lesson they just completed during Accelerated Learning.

Part II: The Art of Teaching

In the Success Zone Model, the Acellus Master Teacher uses the second portion of class time (*20 minutes, for example*) to put the technology away and get the students interacting with one another through debates, laboratory experiments, writing assignments, and more. Once again, the student is at the center of the learning process. All the while, the Acellus system has created the support needed for teachers to concentrate on the kids – by introducing the concept of Special Lessons in the system. It is time for students to take what they have learned and *apply* it!

The diagnostic tools used by the Acellus Gold platform foster mastery of the needed concepts and tasks for student success. Another tool the system provides is something called “Special Lessons.” As previously mentioned in Chapter 2 of this book, Special Lessons are designed for direct use by the teacher in the classroom after the mastery of the learning concepts has been achieved by the individual students (Part I of the daily objectives). Led by the teacher, the Special Lessons are designed for students to demonstrate what they have learned by engaging in hands-on, real-life experiences in the classroom.

Special Lessons, often at a Depth of Knowledge (DOK) level of 3 or 4,¹⁵ offer the chance for students to use cognitive and strategic thinking skills using scenarios that make them react on their feet in real-time. For example, students in an Environmental Science class may be asked to come up with a way to decrease the amount of carbon dioxide and methane emissions from landfills. Working together, students would research and synthesize information to come up with a new, innovative way to solve the problem. Special Lessons can be in a wide variety of different formats, ranging from group work in the classroom to projects,

¹⁵ Paul Main, (2023, May 11). “Webb's Depth of Knowledge,” Structural Learning, May 11, 2023, <https://www.structural-learning.com/post/webbs-depth-of-knowledge>.

debates, and labs. Teachers are given the resources to turn the class into a learning laboratory where concepts are not just taught, but analyzed by the students.

The Acellus Gold system embeds “Special Lessons” into the course itself. When the classroom teacher accesses these lessons, Acellus provides applicable student and teacher resources that save the teacher the time of having to create them from scratch (see Figure 3.11). The teacher, meanwhile, transforms the classroom into an interactive lab full of analysis and interpretation. The students engage with one another -- fostering social interaction and the exchange of different thoughts and ideas. The expertise of the teacher shines as students take a deeper dive into the subject itself. The classroom truly turns into an active laboratory of learning!

The image below shows one conceptual style of a Special Lesson in Acellus Gold. It is from a high school United States History course. The Special Lesson piggybacks on the daily Acellus Gold lesson on Reconstruction after the Civil War in America (see Figure 3.11). Once the students have mastered the learning goals set out in the daily lesson, the Special Lesson is then introduced by the classroom teacher.

This particular Special Lesson is a “Dinner Party” that will span the course of three days (*20 minute sessions each day*) for the students. The students, in groups of 4-6, plan a dinner party where they will be given a list of possible guests to invite from the Reconstruction-era (*1866 to be exact*). The goal of the Special Lesson is to deepen student understanding of the era using critical analysis, historical empathy, and creative problem-solving (*DOK levels 3 and 4*).

The first day students will work in their groups to identify their five historical figures from the list to invite to the party. They will also decide on one “mystery guest” of their own choosing. Each student in the group will “become” one of the historical figures they have chosen. The homework will entail each student researching a figure that they will represent at the table on Day 2 during a role-play exercise. They must find accurate historical evidence surrounding their character’s views on rebuilding the South during Reconstruction. The teacher facilitates the learning by rotating from group to group and expanding the thought process as students dig into the project.

The second day sees the students actually become their historical figure in a role-



ACELLUS

Reconstruction Dinner Party

Teacher Lesson Plan | US History

Introduction
This lesson plan transforms a Reconstruction-era study into an engaging, experiential activity that builds on students' Acellus learning. Over three 20-minute sessions, students will role-play historical figures in a simulated 1866 dinner party, navigating the era's tensions and ideologies. Designed for middle/high school, this plan aligns with DOK Level 3 (Strategic Thinking) and DOK Level 4 (Extended Thinking), ensuring rigorous, memorable learning.

Goal
The goal is to deepen students' understanding of Reconstruction's complex dynamics—political, social, and racial—while fostering cognitive skills such as critical analysis, historical empathy, and creative problem-solving. Students will analyze perspectives, justify decisions, and synthesize outcomes, applying Acellus knowledge to real-world scenarios.

Strategy
Students will:

1. Plan a dinner party, selecting and seating guests based on historical evidence (DOK 3).
2. Role-play figures in a debate, using accurate historical facts to navigate conflicts (DOK 3 & 4).
3. Reflect on outcomes and propose alternatives, synthesizing insights (DOK 4).

The teacher facilitates with clear prompts, minimal prep, and targeted feedback, creating a dynamic experience that showcases their expertise.

- Historical Figures**
- | | | |
|----------------------|--------------------------|------------------------|
| • Abraham Lincoln | • Robert E. Lee | • Jefferson Davis |
| • Andrew Johnson | • U.S. Grant | • Mr. Plantation Owner |
| • John Wilkes Booth | • Nathan Bedford Forrest | • Mr. Freed Slave |
| • Frederick Douglass | • Edward Stanton | |
| • Thaddeus Stevens | | |

Teacher Guidance

Preparation:

- Materials: Name tags, character cards (bio/motivations for each figure), circular table/desks, optional props (candles, gavel), whiteboard, reflection handout.
- Setup: Create character cards using Acellus content (e.g., "Frederick Douglass: Advocates 14th Amendment, former enslaved"). Prepare a 1-page reflection handout with 3 questions (see Day 3).
- Time: 3 sessions, 20 min each. Review Acellus Reconstruction lessons to align content.

Facilitation Tips:

- Engage: Use enthusiasm to set an immersive tone (e.g., "You're hosting a high-stakes 1866 dinner!").
- Monitor: Circulate during group work to ensure historical accuracy; prompt with questions like, "What evidence supports inviting Douglass?"
- Scaffold: Model a role-play exchange (e.g., "As Lincoln, I'd say, 'We must unite with charity for all.'"). Provide sentence starters for struggling students.

Figure 3.11: For Special Lessons, Acellus provides a resource both for students and, as shown here, for teachers.

play (DOK 3). The dinner party will use the prompt: “*What must be done for Reconstruction?*” Additionally, students will debate the following: “*Congress overrides Johnson’s Civil Rights Act.*” Each student, having researched their character, will use historical accuracy to represent the beliefs of that person. After fifteen minutes of role-playing the students will then discuss the insights they found. Here, the teacher becomes the “master of ceremonies” while observing the various Dinner Parties being acted out in the classroom and helping the groups analyze the narrative they created.

The final day of the Special Lesson has the students analyze their Dinner Party. Using critical thinking skills (DOK 4), groups complete a handout on various portions of the role-playing activity from the day before. They offer their thoughts on conflict, seating arrangements at the table, and the changes they would make should they host the same party in the future. The classroom teacher brings it all back together with a final round of analysis and interpretation - with the handout being collected at the end of class.

During the course of the Special Lesson in the classroom, the teacher is constantly interacting with the students. Using expert knowledge, the Master Teacher ensures evidence-based research is being completed by the students while also prompting students who need assistance (*especially with speaking*) to maintain involvement. The teacher turns into the content expert, facilitator of activities, and cheerleader all at the same time - while fostering interactive group activity that stretches the students to think beyond the facts.

The following image shows another Special Lesson from an elementary science class (see Figure 3.12). In this lesson, students are investigating why some objects float in water, while others sink (*buoyancy*). Students get hands-on by designing their own boats using aluminum foil, pennies, and a bowl of water.

Students create their boats and test to make sure it will float. Once that step is complete, they then add pennies to the boat until the boat begins to sink. Finally, the students record data on how many pennies their boat could hold before sinking - and analyze why that took place (see Figure 3.13).

Once again, the teacher acts as the facilitator of the activity, encouraging students on their designs and enjoying the experiment. Additionally, the Master Teacher helps the students dig deeper and analyze their boat designs - asking questions as

Build a Boat

Student Resource

Some objects float in water and other objects sink. What causes this to happen? It's all about the physical properties of the object. The **material** of an object and its **shape** play a key role in whether an object will sink or float.

If you dropped a metal screw into a lake, it would sink to the bottom. A lot of boats are made out of metal though. How can this be? Think about the shape of a boat. The shape of a boat makes a huge difference in how well it will be able to float in water once weight is added.



Assignment

For this assignment, you will be designing and building a boat out of aluminum foil. Then you will test your boat to see how many pennies it can hold before sinking.



Figure 3.12: In this Grade 3 Science Special Lesson, students get hand-on experience with buoyancy.

Investigate

Student Resource

Follow the directions below.

Design your own boat out of aluminum foil and see how much weight it can hold before sinking. Remember, a piece of aluminum foil rolled into a ball will sink. It is important to plan out how you will design your boat.

You will need...

- Paper
- Pencil
- Aluminum foil
- Bowl of water
- Pennies

Directions

1. Draw a sketch on paper of how you want your boat to look. Think about what shape you predict will hold the most weight without sinking.
2. Make your boat. Use a piece of aluminum foil (about 12 inches wide and 12 inches long) to build your boat.
3. Prepare to test your boat. Get a container that is big enough to hold your boat without it touching the sides or bottom. It should be at least 3 inches deep. Fill it with water and put it on a flat surface.
4. Test your boat. Put your boat in water and make sure it floats. Then, add pennies to your boat until it cannot hold anymore and sinks.
5. Record your data. Take your boat and pennies out of the water. Count the number of pennies that you took out of the water and write it down.

Reflection

How many pennies did your boat hold before it sank? Did it hold as many pennies as you thought it would?

How would you design your boat next time? What changes would you make to your design?

Figure 3.13: Students are given prompts to help them analyze their results.

to how the boat could be designed differently to hold more pennies before sinking. The classroom has turned into a research laboratory of exploration!

Notice that in a Special Lesson format the classroom teacher expands on the knowledge gleaned by the Acellus learning system. Classroom projects, research, analysis, and “deeper dives” are accomplished when the students work together in the classroom. The teacher uses their vision, interpersonal relationships, and passion to help the students apply the knowledge they have gained. Teachers are the ones who pull it all together in the classroom to create “light bulb moments” when they watch their kids grow and learn. The combination of the Acellus learning system along with the Master Teacher’s knowledge and passion creates a 21st-century learning atmosphere that brings out the very best in everyone involved.

The role of the classroom teacher in the process has never been more important. The “Art of Teaching,” when combined with the “Science of Learning,” allows for a classroom full of life, energy, and accomplishment. It takes an awesome class-

room teacher to bring it all together. With the drive and energy a great teacher can provide, the 21st-century classroom becomes an engaging, data-driven catalyst for success.

3.4: The 21st Century Classroom

The “Science of Learning” and the “Art of Teaching” cannot exist without each other. The learning process that takes place with the combination of technology and the personal touch provided by teachers creates an atmosphere where students thrive. The technological tools of Acellus Gold and the Science of Learning, when fused with the Art of Teaching provided by passionate teachers, blend to create the 21st century classroom.

As discussed earlier, the classroom from a century ago was one where learning was heavily reliant on the combination of teacher knowledge and a single textbook. Students were meant to follow along with assignments and lessons that were created with minimal knowledge of student learning patterns, diagnostic reports, or attention to detail from outside of their communities. It is no one’s fault that the educational structure was so basic -- it was a product of the “technology” offered at that time.

Fast-forward to a 21st-century classroom utilizing the cutting-edge technology of today. Picture walking into a classroom and witnessing the following:

Students walk into their high school history class excited to start the day. The teacher is energized and ready to tackle a new subject matter in today’s lesson -- the writing of the Declaration of Independence. Everyone in the room pulls up the Acellus Gold learning platform. The Success Zone Model begins.

The first part of the lesson plan, Accelerated Learning, concentrates on students who are assigned and completing the daily tasks that might include video, audio, interactive assessment, and diagnostic testing. When a gap in the learning is discovered, the Acellus system goes into action using Vectored Instruction to hit the “pause” button on the current lesson, get the student back on track, and proceed to ensure that all concepts have been mastered.

Meanwhile, the Master Teacher monitors all classroom activity on the Live Monitor. Student progress and success in the lesson are kept track of by the classroom educator, encouraging students and providing assistance when

needed. If a student is struggling, Vectored Instruction is triggered as well as one-on-one classroom support to make sure issues are being addressed. The teacher's interface begins to light up with data indicating the students are successfully completing the day's lesson.

When the initial work is completed by the students, and everyone has mastered the knowledge needed, it is time for the Art of Teaching and the Special Lesson to take place. The teacher uses their passion, energy, expertise, and rock star mentality to engage with the class in an interactive task designed for students to apply what they have learned. The teacher pulls the students into interactive groups. Their task is to create a visual representation of the meaning behind the Declaration of Independence. Students are given materials (poster board, markers, etc.) and tasked with creating visual art that shows an overall understanding of how the American colonists would have reacted to the news that the colonies had officially broken away from Great Britain and formed the United States of America.

The teacher helps each group with their brainstorming and design. When finished, the groups report out and share the concept behind their poster with the rest of the class. The teacher provides conceptual detail and commentary that pulls the artwork into the main ideas of the day's lesson, using their expertise in the curriculum to ask questions and build cognitive skills with the students. The teacher then hangs the poster designs in the classroom for the duration of the unit on the American Revolution.

Can you picture the classroom as described above? Can you feel the excitement, energy, and passion behind the learning? Not a minute of time goes to waste. The students are engaged from the very beginning of class. The conceptual knowledge is provided by the tools of Acellus Gold – while the classroom teacher facilitates all activities for those needing additional help and assistance (something not possible for teachers to do in the past in real-time). The interactive Special Lesson, delivered by the skill and expertise of the teacher, then draws together the learned concepts and has the students get hands-on with the application process. The end of class sees the mastery of the concept with a group presentation with all students moving forward on the same page.

The 21st-century classroom is not just technology-based. It is a blend of learning

using tools that enhance the educational experience and allow students, regardless of ability level, to be a part of their own success. The 21st-century classroom places the responsibility of learning not just in the hands of teachers -- but of the students themselves.

The 21st-century classroom, however, does not stop with just improving student performance. Teachers, once tasked with having to literally be the only source of lesson creation, today are given 5-star materials developed by an entire team behind them that provide the ability to actively monitor student success while it takes place -- instantly, in real-time. Teachers engage with the students while they are completing the lessons on Acellus Gold and monitor assessments for any gaps and issues that may arise. Using the tools of the Acellus Gold teacher interface, educators can now help students with specific issues they are having right at that moment, instead of at the end of the entire unit when a comprehensive test is taken. Teachers, like never before, are armed with the tools needed to lift students higher toward success.

All the while, the most valuable thing is gained for all educators -- TIME. *Time* to watch students as they complete tasks and move forward. *Time* to engage in one-on-one assistance with students who are having specific learning holdups. *Time* to message students and parents with success stories as well as concerns. *Time* to have fun by facilitating Special Lessons and helping kids get hands-on with the learning. *Time* to be what they entered the education profession for -- Rock Stars who help kids achieve their potential, and beyond!

The 21st-century classroom is one where all students can succeed. It is a place that provides the technological tools that reach all learning levels and meet the students where they are when they walk into the classroom. It is a place that fosters both individual success and cooperative learning. It is a place where parents have instant access to their child's progress. It is a place where communication between the teacher, student, and parents is constant. It is a place where teachers are actively involved with the kids they teach, understanding what is needed for success. It is a place where learning is interactive, inquisitive, analytical, and FUN!

CONCLUSION: GO FOR IT!

It's your turn.

Those who enter the education profession do so with a will to help kids succeed. There is a passion and a drive that teachers have to want students to become the best they can be. It does not matter what the year is, the makeup of a teacher has been the same since the beginning of the concept called “school.”

It is up to each and every teacher to gain the best possible tools available for their students. Understanding the latest technology is paramount to providing a learning atmosphere that not only teaches the concepts of the curriculum but also does so in a way that allows the students to utilize abilities they already possess and develop new skills.

The Acellus Learning System acts as a partner with the teacher. Acellus provides 21st-century tools that enable teachers to do more than ever before to help their students. Meanwhile, the Acellus system relies on the teachers to be the experts they are with both content knowledge and personal knowledge of how their kids learn. When combined, the two amazing forces of education create a great place for students to become the best versions of themselves.

It is up to each teacher to create the overall vision for how learning takes place in their classroom. The teacher is the one who engages daily with each student. The teacher is the one who provides the personal touch of real-life scenarios for learning that bring the lessons to life. The teacher is the one who leads interactive discussions, projects, presentations, and lab work. It is the teacher who motivates and inspires in ways that can only be understood by those who interact with the students on an individual level each day.

Great teachers take the time to find the best possible tools to aid in their instruction. They search for ways to make the classroom come to life and be relevant for their students. They engage in professional development to ensure they master the new tools put before them to enhance their instruction (see Figure 4.1). They understand that to be a great teacher, they must also be a great student. When great teachers take the time to do everything they can to create the best learning environment possible for their kids, they truly become the Rock Stars of education (see Figure 4.2).



Figure 4.1: Teachers and Administrators gather in Kansas City, Missouri, to learn how to most effectively make Acellus Gold a part of their students' educational success stories.

Acellus supplies the technology and tools to enable a wonderful learning experience for kids, providing each individual student the hope and promise that they can succeed. Great teachers understand what awesome technology can do in a classroom. They visualize what their classroom can become. They welcome the educational advancement that the technological tools of the 21st century can furnish. Great teachers run towards progress and embrace new ideas.

Your time is now!

Remember your “why” for being a teacher!

Become a 21st-century educational ROCK STAR!

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The author, filming a United States History Course, on location in Boston. Here he is standing in a room where, allegedly, George Washington interrogated two British spies. With a passion for both history and teaching, the author finds it fairly easy to bring history to life in his classroom.

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The author in Boston, at the Boston Tea Party Ships & Museum, a floating museum where he participated in a live reenactment by throwing tea into the harbor.

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The author in Boston, standing in front of the Old North Church, where two lanterns were held up to alert patriots to the British Army's choice of traveling by sea.

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The author looks out over Boston from the Old North Church, where Robert John Newman and Captain John Pulling held two lanterns aloft for just one minute to alert the men of the area to get to Concord and defend it.

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The author in Boston, filming Acellus lessons at historical locations.

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