PATRICK CERRIA

FINDING THE FLOW

HOW **DALCROZE EURHYTHMICS** AND A NEW APPROACH TO MUSIC EDUCATION CAN IMPROVE PUBLIC SCHOOLS

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Finding the Flow: How Dalcroze Eurhythmics and a New Approach to Music Education Can Improve Public Schools

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This book is wholly dedicated to my wife and life partner, Laura, who I love more than anything in the world; also to my son Jack, daughter Annie, and our dog, Cookie. I love you. You're my soul and motivation.

I also dedicate this book to every student I've ever worked with.

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Without all of you, this book doesn't happen. Thank you!!!

INTRODUCTION

Inclusion/Technology/Science/Medicine/Academic Research/Self-Discovery

I would like to begin this book by stating I believe the American public education system is the best in the world. I see it as a reflection of our society, in that it is culturally, ethnically, economically, and developmentally diverse. Our public education system, like our democracy, is always in a state of change, evolution, or adaptation—and our schools, like our democracy, are based on an idea of inclusion. We educate all of our children regardless of race, creed, color, religion, or ethnicity—as well as ability, disability, and socioeconomic status. It is an open system, and I see this as its biggest strength. Our public schools are great for these reasons—despite the voices of many education reformers and prominent individuals trying to convince us they're a disaster.

This open system—while being a huge strength—is also what makes our schools very complex. The job of American public education is to take all of these incredibly bright, talented, and diverse students and allow them to reach their fullest creative, intellectual, spiritual, and social potential. This is not just the job of the school but of all the elements of society and community that surround our schools.

However, within the last twenty years, our society has gone through massive changes, and these are affecting the way in which our schools have been able to change and adapt. For one thing, there has been a seismic shift in technological advancements. This has impacted every aspect of our lives. Perhaps the most important impact has been on our children's social, emotional, and physical development—as well as the way they learn.

This technological evolution has also caused subsequent shifts in medical and scientific research. Faster and more efficient technology has led to more efficient ways in how data is collected, sorted, and organized. It has also impacted the way we analyze and treat various medical diagnoses—specifically those that affect our children. One shining example of this is autism spectrum disorder (ASD).

At one time, children with an ASD diagnosis were viewed singularly. It was believed they were able to make it only to specific developmental markers. Today—thanks to medical advancements and the development of better therapies—children with ASD not only make it past developmental markers never before imagined, but many now graduate high school, attend college, or are holding down jobs and are functional members of society.

While technology, science, and medicine made this possible, what really made a significant impact was the evolution of special education. I, personally, can't help but flash back to my public school experience of the 1970s/1980s and what "special education" was like back then. It pales in comparison to the comprehensive programs of today. Our improved model of inclusion has allowed students with special needs to flourish.

I have worked extensively with special-needs students, students living in poverty, as well as inner-city kids, and I'm shocked at how our public schools accommodate so many varied populations of students. It is humbling and overwhelming. Mind you, this wasn't always the case. At one time, we did not come close to educating our special-needs children as comprehensively as we do now. In fact, we practically barred them from public schools all together. But that changed and evolved over time.

Is our system perfect? No, but our schools will continue to evolve, change, and adapt, because they always do.

I believe we've reached the next big point of change regarding our schools and overall education system. These pages are an attempt to point out what I see as some obvious evolutions and adaptations that need to occur. I don't believe the system is broken. Rather, I think we need to step back and reexamine how we're teaching our kids and—more importantly—how we're training our teachers. It's time to make some adjustments.

This book is the result of all of my experiences teaching and working with students of varied ages, backgrounds, and abilities. I have been lucky enough to teach in schools that serve inner-city children; physically disabled students; developmentally disabled students; students who have behavioral and emotional classifications; students classified as at-risk; and those who are typically developing.

I have worked with students as young as eighteen months all the way through to twenty-one years. I have taught students who were nonverbal, and I've taught students who were on probation after being arrested. I've worked with students who were contemplating joining a gang, and I've worked with those who were heartbroken because they didn't make their high school golf team. I am proud to say that I have worked with an array of wonderful kids.

In addition to my teaching experience, this book is also inspired by my studies in a method of teaching music called Dalcroze Eurhythmics. I completed a three-year study in Eurhythmics and was awarded an Elementary Teaching Certificate from The Juilliard School in Manhattan. Since that completion, I've worked with all of the aforementioned populations of kids and have been humbled by what Eurhythmics enables me to do as a teacher. As of the writing of this book, I am in the next phase of Eurhythmics studies at the Marta Sanchez Dalcroze Training Center at Carnegie Mellon University in Pittsburgh, Pennsylvania.

Around three years ago, I decided to begin going into public schools to present staff-development workshops on Eurhythmics. Initially, I went and spoke solely to music educators. As time went on, I found myself speaking to more and more *non*-music educators. Classroom teachers began coming to my workshops to hear about Eurhythmics-based strategies for their students.

After a couple of years of presenting my workshops, I was invited to speak at an early-childhood-educator conference in Chicago, where I spoke to more than 300 teachers, none of whom were

music educators.

The message I was hearing from both classroom and music educators was loud and clear: Their students were more socially and developmentally diverse, and this was making their job more complex. In addition to this was the sudden view of education—and learning—as a global contest. Teachers were telling me how they were now responsible for teaching subjects at breakneck speed to roomfuls of developmentally and socially diverse students and that this was affecting the entire class dynamic.

Of all the skills teachers must possess, classroom management has become the toughest to maintain. Creating a healthy classroom dynamic has become more and more difficult, for a number of reasons. I believe what is further complicating effective classroom-management skills is that teachers are not being adequately trained to face the varied populations of students they must now teach. They walk into classrooms and are, literally, overwhelmed.

As I was getting ready to complete this book, something else happened that had a profound effect not just on education but on life as a whole: The COVID-19 pandemic. Everything about school, education, life, society, and economics was essentially thrown out the window.

America was suddenly confronted by the extended role "school" plays in our lives. It turns out it's not just the building where our children go to learn math, science, and reading. It's also the place where many kids get their breakfast and lunch, where others receive structure, discipline, and guidance, and make lifelong friendships. Perhaps the most shocking thing that emerged was just how important school is to the daily functionality of society. It turns out that our schools are essential parts of our communities in ways we were never made to see before.

In addition, the role of technology in education suddenly experienced a massive shift. Public school districts across the United States moved to remote and virtual models of teaching. Educators who had been teaching live in a classroom for thirty years were suddenly told they'd be teaching through applications with names like Zoom and Google Meet.

Teachers across the country were asked to make a never imagined pivot in how they teach, and what their idea of a classroom was. Classroom management became an even more complex task as it now had to be done within the context of a what amounted to a live group video chat.

As the 2019/2020 schoolyear ended, rituals and rites of passage that are as much a part of education as academics were completely derailed. Senior proms as well as middle and high school graduation ceremonies were cancelled. As summer began, it was assumed that by the fall we would be able to go back to something resembling "normal" school. This was not the case.

As I am writing this, there are students across the US who have not set foot inside their school for over a year. There are students who started their freshman year of high school remotely. I personally teach students who are stressed out by the whole thing. Likewise I have students who have rolled with it and haven't been affected at all.

The COVID-19 pandemic has shown us that—by and large—technology cannot replace what in-person education provides for most of our kids. Education is complex and the pandemic has shed light on a fact that most every educator and parent understands: Not every child learns the same way.

In the following pages, I try to address not only the changes that have affected our schools but also what I believe we can do to help move them in the right direction. I used not only my own experience as inspiration but also the voices of the hundreds of teachers I've worked with over the years. In addition, this book is a direct result of the thousands of students I have taught and continue to teach. They are, after all, the reason I do what I do.

I see education as a journey of self-discovery. It is something that involves not only learning but

also trust, as well as emotional, social, and physical growth, along with curiosity, discovery, and, most of all, guidance.

As teachers, we have to simultaneously be able to do all of those things—in addition to teaching our subject(s). I hope this book can help with that.

1

DEVELOPMENTAL DIVERSITY

Technological, Scientific, and Medical Advances/Individuals With Disabilities Education Act/Inclusive Schools

This may sound crazy, but I'm going to begin a book about how I believe music education can improve public education by writing about advances in computer technology. I ask that you bear with me.

We now take computers and other digital technologies for granted. They have become a regular part of our lives. They not only provide communication services (email, text, video chat, phone calls) but are also where we do a majority of our written work—be it math related and/or research. In addition, they now provide hours of entertainment.

We watch movies and TV shows not only on our computers but also on our phones and tablets. We can live-stream sporting events anywhere, anytime. Streaming—as it's now known—has become a huge part of society, so much so that the phrase "binge watch" is now part of the cultural lexicon.

Computers also do things like start our cars in the morning, turn our house alarms on or off, store our music and photograph files, host websites like Amazon, track the packages we ordered from Amazon, enable us to balance our bank accounts from the living-room sofa, make our plane and hotel reservations, and even read the paper.

What many of us don't realize is that the computer has been evolving since the 1940s. Starting with the Z3—built in Germany in 1941—we have experienced a never-ending digital evolution. While the early computer's primary concern was helping to solve math problems or crack codes (like the British Bombe, designed by Alan Turing to help break the German "Enigma" code during WWII), evolutions have since allowed them to handle data crunching as well as all of the aforementioned entertainment outlets.

In addition to its physical design, the other evolution in computers has been the speeds at which they process information. We have all seen photographs of early computers that occupied entire

rooms. Our modern-day models not only fit in our pockets but process information at blazing speeds—and this is only going to increase.

In addition to processing information fast, computers also organize and sort it for us. The sorted and organized data that comes out of our machines has affected many facets of our lives. One example is how modern statistical analysis has impacted the game of baseball. Teams now base pitching changes, batting lineups, and entire game strategies on computer-generated data they've accumulated on opposing teams, as well as individual players. Because the manager in the dugout has well-researched and sorted data on every batter, he can shift his defense based on where he knows each batter will most likely hit the ball. If he has a lefty pitcher in the midst of a close game, and his data tells him the next batter due up hits lefties really well, he'll take that pitcher out and put in a righty. Computer-generated data has, literally, changed the sport.

When you're going on a long trip, or even around the corner, you now enter your destination into an application on your phone. Not only will the application tell you how to reach your destination but will also alert you to shorter routes *as you're driving*. Your phone is actually processing and analyzing live data regarding traffic patterns, accidents, and/or construction—and doing so at lightning speed.

What began with the Z3 evolved over the last sixty years and has dramatically shifted our lives. One area that has seen the fruits of this evolution is medicine—and one of the biggest pushes behind this was the Human Genome Project (HGP).

The HGP was created to map out the genetic structure of human cells so that scientists could better explore what we all have in common. The idea for the HGP began in 1984 but did not go into full effect until 1990. Taking advantage of existing digital technology, the HGP team began developing technologies of their own. These were aimed at developing advanced techniques that could help analyze and further study the role human DNA has in disease. A secondary objective was to see how illness specifically affects our physiology.

In 1996, the HGP sponsored a summit meeting in Bermuda. At this summit, it was agreed that:

". . . all human genomic sequence information generated by centers for large-scale human sequencing should be made freely available and in the public domain within 24 hours after generation."[1]

Essentially, the HGP wanted to create a massive database. This could then be used openly by the medical, academic, and scientific communities to exchange ideas, reference information, and see what other people had discovered. These became known as the Bermuda Principles and were like a worldwide interactive database. It was, essentially, crowd-sourced science . . . by scientists. This changed the existing idea of research—which was generally saved for publication in medical journals

—and made it more of an open source for scientists from around the world. Again, technology was at its root.

The byproducts of the HGP were almost immediate. In 1999—only three years after the Bermuda Principles—scientists were able to sequence human Chromosome 22. This was the most continuous piece of DNA ever decoded. Scientists could now get a look into how disease and illness affected cell structure. It also allowed for scientists and medical professionals to develop new approaches and techniques for treatment. The amazing thing is that the Chromosome 22 research was a result of scientists collaborating from the US, England, Japan, France, Germany, and China. The open source of the HGP was already producing results.

The byproduct was that, throughout the 1990s and beyond, medical research took on a whole new life. The world experienced the benefits of this regarding the COVID-19 pandemic. When the virus was discovered in China, scientists immediately ran the viral DNA code through a supercomputer to get a detailed breakdown of the virus and its unique spike protein. The information that the computer provided became the blueprint for the vaccines that emerged less than a year later.

One area that has benefitted tremendously was the way we diagnose and treat children with physical disabilities as well as those with developmental and sensory-based delays.

As technology allowed for better insight into the causes of developmental disabilities, improvements in various treatments and therapies made them more effective and sped up their development. This had an incredible impact not just for children with disabilities but also for their parents. Breakthroughs in protocols such as occupational and physical therapy allowed children to develop past physical points and developmental markers in a way never thought possible.

Further developments in specific therapies, such as Applied Behavior Analysis (ABA), allowed evolutions in the treatment of children on the Autism spectrum and with other sensory-based delays. Speech therapies also improved and allowed professionals to discover that many subsequent behavioral problems associated with sensory-based delays were rooted in the frustration of children not being able to communicate and express themselves.

Because of the HGP, breakthroughs in the science of genetics led to earlier diagnosis and improved treatment. All of this demanded evolutionary change in the mindset in not only how children with special needs were treated but also in how they could be educated.

The history of special education in the United States is complicated. We, as a nation, have always flirted with denial when it comes to how we educate students with special needs. This, unfortunately, is still the case. As recently as 2017, the state of Texas got into a lot of trouble for the way they treated students who were legally entitled to receive special-education services. According to a report in the *Houston Chronicle*, the state systematically denied services to ". . . tens of thousands of families . . ." Why did the Texas Education Agency do this? To put it simply: money. What happened in Texas shows how special education is still a difficult and sore subject within our public education system, despite the evolution of special-education policies over time.

In 1975, the United States passed a piece of landmark legislation called the Education for All Handicapped Children Act (EAHCA), but the passing of EAHCA was the result of a long and difficult journey.

Before 1975, children with varying disabilities and/or diagnoses were literally excluded from their public schools. Many states went so far as to enact laws flat out barring children from their schools who were blind, deaf, or suffered emotional or developmental disabilities. According to the Department of Education, in 1970, American public schools educated only one in every five

children with disabilities. EAHCA was vital because it meant that some—but not all—special-needs children would now have access to their public school.

EAHCA was more than a response to a need to educate disabled children. It was a byproduct of other things that had been building for more than twenty years. These included programs such as the Training of Professional Personnel Act (1959) and the Teachers of the Deaf Act (1961). These programs trained educators to accommodate varied learners. They also woke people up to the fact that disabled children oftentimes were more intelligent than initially thought. This helped to slowly break the practice of placing young children and high-school-aged kids into mental hospitals, where they were mistreated or ignored. This also slowly helped to discover that—through use of proper techniques—disabled children could actually be taught in a proper school environment. By 1968, more than 30,000 special-education teachers were working in public schools, thanks to federally funded programs.

The 1972 federal ruling *Mills v. Board of Education of the District of Columbia* mandated that all states educate children with disabilities. The education of disabled children was now covered in the Equal-Protection clause of the 14th Amendment to the Constitution. *Mills* also mandated that districts could not use excuses such as poor funding or lack of administration to deny education to disabled students.

Mills helped special education evolve further and served as an early sign of things to come. Still, many districts put only small or ineffective programming in place, and children were still underserved or ignored by their public school districts. When EAHCA was passed, it helped further the development of programming that *Mills* mandated.

As EAHCA and its policies settled into the public-school landscape, technological and medical evolutions were beginning to pick up speed. The ’70s and ’80s saw massive technological jumps, and, by the time the ’90s rolled around, the HGP was in full swing. The snowball of research, technology, and scientific/medical collaboration was reaching a pinnacle. This also led to improved therapy techniques, which allowed for growth and development in special-needs kids previously thought impossible. This prompted the asking of a significant question regarding our special-needs children: If improved therapies could progress children’s development up to, and past, certain points, why not make therapies a part of the education process?

In 1997, EAHCA was amended and became the Individuals with Disabilities Education Act (IDEA). This further ensured that children with disabilities were entitled to a free public education. One of, if not the, most significant thing that IDEA did was state that special-needs students were now entitled to the *individual* services that came with that education. This language helped to implement early-intervention programs into public education as well as things like Individualized Education Programs (IEPs), amounting to a paradigm shift in American public education that we are still adjusting to and coming to terms with.

According to the National Center for Educational Statistics, 14% of the American public-school population now receives special-education services—that’s 7.1 million children nationwide. To put that in perspective for you, the overall population of the state of Rhode Island is 1.1 million people. That means seven Rhode Islands solely populated with special-needs kids report to public schools every day, and these children come with an array of diagnoses and classifications.

Advances in medicine have also provided the ability to zero in on statistics relative to specific disorders affecting our kids. These statistics and data show just how developmentally diverse our children are. An important study done by the Centers for Disease Control and Prevention (CDC) on neurological-based disabilities in American children ages 3 to 17 produced some staggering statistics:

- 3.2% have a diagnosis of depression (approximately 1.9 million)
- 7.1% have a diagnosis of anxiety (approximately 4.4 million)
- 7.4% have a diagnosed behavioral classification (approximately 4.5 million)
- 9.4% (children aged 2–17 years) have a diagnosis of Attention Deficit Hyperactivity Disorder (approximately 6.1 million)[2]

What's amazing to me about that study is the significant number of children diagnosed with something as serious as depression. Yet, diagnoses in other neurological disabilities *increase* beyond that. It's also important to note that these statistics are pre-COVID-19 pandemic. This is how the American public-school classroom looks today.

Science and technology are providing us with more insight into the developmental diversity of our students. This has meant dramatic change in all aspects of education. School faculties have changed and now include in-class aides, paraprofessionals, and occupational (OT), physical (PT), and speech therapists—in addition to teachers. Many districts now offer extended-school-year programs, specifically for children on the Autism spectrum. These require the hiring of full-time summer staff or paying full-time staff to remain on through the month of July.[3]

This has also meant physical change to school buildings themselves. Districts have dedicated whole classrooms, corridors, or, in many cases, entire buildings to accommodate special-needs populations. School-based early-intervention programs begin providing services to children as young as three years, further increasing the need for classrooms, physical space, and staff.

Modern public school administrations now include—in addition to Principals and Vice Principals—entire child-study teams composed of psychiatrists and/or behavioral specialists. They oversee the development of protocols like Individualized Education Programs and behavioral modification programs—which have become standard pieces of public education. These protocols require detailed communication between the child study teams, parents, principals, and medical professionals. Administrators must also communicate with teachers, aides, and therapists. As therapies and treatments evolve, so must the school's policies and protocols.

Thanks to IDEA, we've come to realize that educating children with special needs is nothing short of dynamic. Walk into any American public school, and you will find a developmentally diverse space that includes students who have not only physical disabilities but also sensory and/or developmental delays. There may also be students with behavioral and emotional classifications. Within a single classroom, it is not unusual to find three varied learning types and/or multiple aides or paraprofessionals. Students leave at various points for therapies and/or "pull-outs," in which they receive one-on-one or small-class instruction in specific subjects. Teachers, therapists, aides, parents, and the Child Study Team all work together to make sure needs are met and progress is being made. It is extraordinary, and it has served to show us that the education of <u>all</u> children is incredibly complex—not just for those with special needs.

American public schools are now more inclusive than they've ever been. They—like our country—are more diverse, which means that teaching, which has always been a dynamic and creative profession, has become even more so. I think it's important to repeat this: *Teaching, which has always been a dynamic and creative profession, has become even more so*.

These varied and dynamic populations are what American teachers are facing when they walk into their classroom, and these same populations are what faced school districts across the nation as they closed due to COVID-19. This developmental diversity within our schools is but one piece

affecting the way we teach our kids. Developmental diversity is not a singular element but part of a much-larger picture.

1 "A Brief History of the Human Genome Project" Website: https://unlockinglifescode.org/timeline?tid=4

2 "Data and Statistics on Children's Mental Health" Centers for Disease Control and Prevention Website: https://www.cdc.gov/childrensmentalhealth/data.html

3 My district's extended school year now runs into early August.

2

THE SOCIAL, EMOTIONAL, AND DEVELOPMENTAL EFFECTS OF TECHNOLOGY AND CHILDHOOD POVERTY

Sense of Self/Social Media/Extrinsic vs. Intrinsic/Outdoor Play/Human Interaction/Empathy/Childhood Poverty

In *Hamlet*, Shakespeare has the character Polonius speak these immortal words to his son, Laertes:

"This above all: to thine own self be true."

These words are now often found hanging on classroom walls, written on refrigerator magnets, or even on Facebook posts. Maybe they're among some of the most overused Shakespearean words. I believe they're vital when it comes to what is happening with our kids today.

When we think of education, we immediately think of academic subjects like math, science, writing, reading, etc. One thing not considered enough is how education develops us *within*—how, beginning that first day of kindergarten or pre-school, we begin interacting with peers, exploring new ideas, and hearing other people's perspectives.

We see, meet, and interact with other students who may not look like us and maybe dress differently than we do. Perhaps they talk differently, too. We are suddenly thrust into a whole new social environment where change is both a curiosity and a challenge. The term "peer pressure" exists for a reason. How much of those around us do we want to emulate? How much do we ignore? School is a place for not only academic growth and development but also for social, emotional, and creative growth.

Academic development makes this process more complex as it provides further questions toward a student's developing sense of self. Students not only learn new subjects but begin to consider how they apply personally. As students progress through school, these considerations become deeper

questions: *What subjects do I like? What am I good at? What interests me? Can I make a living doing it?* Compounding these questions is social and emotional development, as well as peer pressure: *Who do I want to be? What kind of person am I? How do I see myself?* These are commonly known as "inner skills," and the formation of healthy inner skills is essential to the overall development of our kids.

Young people have always been affected by those around them. However, the difference between, say, middle-school students in the 1950s, '60s, and '70s, and middle-school students today is that those from the past left school, and, for the most part, the peer and social pressures stayed there, too. They got home from school, had a snack, and went outside to play. Maybe they went upstairs to read a book. Perhaps they read a magazine or listened to the radio. If they watched TV, it meant a selection of maybe five channels.

Today, a typical middle-school student leaves school and, as she's walking out the door, pulls out her phone to check social media. Some of her classmates have already posted photos of themselves walking home together. Based on the photos, it's the *craziest* and *best walk home from school ever*. By the time she gets home, that same group has posted another update, or video, of them having something to eat at a local pizza place. Maybe they posted a group TikTok. *Why wasn't I invited?* she thinks as she's staring into her phone.

As she puts her phone down, it buzzes: it's a text from a friend asking if she's seen the images and videos the other group have been posting. In a series of text messages (not face-to-face or live conversation), the two friends commiserate and/or speculate as to why they were left out of the outing.

As the text-message discussion ends, her phone buzzes again: another photo update. As she scrolls past it, there's an ad for one of her favorite clothing stores. She clicks through and notices the ad features a shirt one of the girls in the photo from the pizzeria was wearing. She wonders if she can afford the shirt—and begins to wonder if her sense of style is why she wasn't asked to join the group for pizza.

By this time, forty-five minutes has passed, and the girl has not stopped interacting with her phone. In that time, she's questioned herself not from within but based on what's transpired on the screen of an electronic device. She has been bombarded with information and this has taken place while she is all alone. She has *interacted* with others, but not physically, emotionally, or in person. She has looked into other people's lives and drawn conclusions—again, not through live interaction.

She has also been inundated with advertisements that were, themselves, generated by artificial intelligence. The music she listens to comes from a streaming service and, based on her selections and/or playlists, provides other musical suggestions with a caption that maybe says "*Because you liked . . .*"

The girl toggles between social media applications (TikTok, Instagram, Snapchat) while checking Twitter. Her music is still going. It is a non-stop stream of sounds, images, people, places, and impressions. It's important to remember that, throughout this experience, she is alone.

In 2012 something very important happened in our society: the percentage of Americans who own smartphones surpassed 50 percent. Social media and smartphone technology have drastically changed the way our children begin to perceive who they are. The natural questions they ask of themselves regarding self-discovery have been corrupted.

Klaus Schwab, the founder and executive director of the World Economic Forum, believes that we are living in the Fourth Industrial Revolution. As Mr. Schwab has cited, the First Industrial Revolution was the result of humans discovering the power of steam and water. The second was further harnessing the power of electricity. The third was about electronic-based information

technology. This current revolution is unique, Schwab believes, because it is not solely based on a power source. This revolution is about a fusion of technologies that is blurring the lines between the digital, physical, and biological.

Technology is now crossing all kinds of lines and is doing so at a rate of speed and development that is unprecedented. The result is that our lives have been profoundly affected, and not just from the perspective of commerce. This revolution has caused us to question things such as:

- Self-Identity
- Ownership
- Consumption patterns
- The separation of work and leisure
- Skill sets
- Human interaction and relationships

Mr. Schwab commented on the effects of this and said something that simultaneously intrigued me and gave me chills:

"One of the features of this fourth industrial revolution is that it doesn't change what we are doing, but it changes us."

There are many child psychologists who believe one of the most significant changes we've seen in our kids is a shift from *intrinsic* to *extrinsic* thinking. Intrinsic thinking is creating our own ideas and philosophies from within. It's processing information and then coming up with personal goals and plans based on who you believe yourself to be. This belief is based on a deep dive within your own thoughts, ideas, human interactions, and perception of those things around you.

Extrinsic thinking is the opposite. It is the creation of goals based on what *other* people may think. This way of thinking is motivated by materialistic pursuits—being rich, social status, and/or being "good looking." This thinking may cause friction with the real person one knows themself to be inside. It clashes with the intrinsic and can result in stress, depression, and anxiety.

Kids are now growing up in a world where likes, followers, and views carry social status and self-acceptance. These are garnered through photos or images posted to social media and typically are based on how one looks, who they're with, and where they're at. The likes, views, and followers come twenty-four hours a day, seven days a week. Young people are constantly searching for peer validation, and the added stress of how many likes and followers one has can lead to self-doubt and a

feeling of vulnerability. This has impacted the way our kids think as well as their social and emotional intelligence—and these ultimately affect their mindset when they come to school.

As smartphone use increased among kids, so did diagnoses of anxiety and depression. Some child psychologists have referred to this as "Duck Syndrome"—meaning that, as young people try harder and harder for peer validation, they duck deeper into their phones.

Dr. Jean Twenge is a psychologist who has written extensively on generational differences. She refers to the current generation (born between 1995 and 2012) as "iGen." They are unique in that they have grown up not knowing what life is like without Internet and/or smartphone technology.

Twinge wrote an article for *The Atlantic* that carried the ominous title: "Have Smartphones Destroyed a Generation?" The article discusses the effects of social media on our kids.

I have seen these effects firsthand. The way our kids socialize and the way they think have been drastically impacted. I have two children of my own, so I look at this technological advance from the perspectives of both a parent and an educator. It's incredible to see how technology has changed not only the way our kids communicate but also the way they study for tests, arrange practices for sports teams, obtain news and cultural information, and plan their social lives.

But this technology has also impacted the way they (and we) think. The phone is no longer just a tool used to communicate. It is now the way kids—literally—do everything. It's how many kids read books or articles. It's how they watch movies and listen to music. For some, it's how they do *all* of those things *at the same time*. It is information overload, and to think this isn't affecting the way our children's minds process information is shortsighted.

Digital technologies like smartphones and/or tablets provide students with access to an endless supply of valuable materials. The Internet is, indeed, a world of limitless sources and information, but are we teaching our kids to use it like that? I remember when the Internet was brand new and was labeled the "information super-highway"—and while things like the HGP have proven that label true, there seem to be more websites and smartphone applications whose purpose is not to provide facts and information but, rather, to do the complete opposite.

The question "What is truth?" needs to be asked today. It is no secret that, in our current society, the idea and concept of truth is in jeopardy. Students can go onto websites, or their Twitter feed, and discover 16 different stories revolving around a singular event. Conspiracy theories that were once limited to the fringe of society or the front pages of supermarket tabloids are suddenly mainstream narratives. Truth, and how to find it, now needs to be something taught in our schools —and this is also adding to the pressure of self-discovery.

The Internet and smartphone applications provide immediate access to an unprecedented amount of entertainment and information. It's like having a semi-truck filled with vinyl records drive up to your house every day and empty its contents into your front yard. Right behind it is a semi-truck filled with books, then one with newspapers, then another with movies and videos. That, literally, happens every day. How much of that information are kids, and adults, taking in? How much are we actually processing? How much are we retaining? How much of it is true?

Technology has advanced, and young people have the world, literally, in the palm of their hand. The problem is, when young people read off of these devices, it's the equivalent of skimming across the surface of a lake on a jet ski. Trees fly by, as do other jet skiers and boats. There are loud sounds and water splashing into your face. It's distracting and difficult to concentrate.

In addition to the increasing effects of technology on typically developing kids, teachers are also dealing with the aforementioned populations of special-needs students in school. In many instances,