Anticipating the Future of Learning

Victor Rivero April 03, 2023

After his FETC keynote, following up with futurist Daniel Burrus.

INTERVIEW | by Victor Rivero

IMAGES: BURRUS RESEARCH

Considered one of the world's leading futurists on global trends and disruptive innovation, *The New York Times* has referred to Daniel Burrus as one of the top three business gurus in the highest demand as a speaker.

Burrus is a strategic advisor to executives from Fortune 500 companies helping them to develop game-changing strategies based on his proven methodologies for capitalizing on technology innovations and their future impact. He is the author of seven books, including *The New York Times* and *Wall Street Journal* best-seller *Flash Foresight*, as well as his latest *Amazon* bestseller, *The Anticipatory Organization: Turn Disruption and Change Into Opportunity and Advantage*.

He keynoted the most recent Future of Education Technology Conference in New Orleans, where he spoke to thousands of educators on "Technology Hard Trends Elevating and Transforming Education" blending rich examples and sharing the most important technology hard trends that can be used to elevate learning, transform processes, and shape the future of education. He examined potential disruptions, as well as the game-changing opportunities hard trends provide.

In this *EdTech Digest* exclusive long-form interview, Burrus, who decades ago began as a science teacher and went on to found and manage six successful businesses, continues the conversation on the future of learning. As a note, upon being asked to appear in *EdTech Digest*, Burrus scheduled in less than 24 hours.

Thanks for making a little time here—I'm assuming you might have 30 minutes.

Yes! And I could give you a little more time than that, because the subject of edtech is extremely important, and because it's not just the new technology we can now use, it's about how technology can empower educators to accelerate learning.

You recently keynoted Future of Education Technology Conference, and the feedback has been amazing. I know you've keynoted all sorts of conventions on a wide-range of industries throughout the decades, but I also know you have a special interest in education, can you tell me more about that?

You're correct, I have delivered over 3,000 keynote speeches during the past four decades all over the world, and they are all different because I take the time to customize them for each specific audience. This is both better for the audience and better for me in that I learn much more as I prepare for each speech. At Burrus Research, we do research on the latest technologies world-wide, we do strategic advising, and we have many publications such as newsletters and special reports, so it's not just my speaking.

It's important to know that I've had a commitment to education from the beginning. When I started Burrus Research, and focused on the future, I knew in addition to helping leaders in business and government, I needed to help both educators and students. To accomplish that I started an education division of my company that's been at over 8,000 schools in the United States delivering science assemblies, getting kids excited about robotics, new technology, and their future. I partially underwrite the assemblies to keep the cost down because I've got a commitment to helping all ages to get excited and involved in actively shaping a better tomorrow, and we've been doing that since the early eighties. In addition, we've delivered many teacher in-services related to this as well.

Recently, we stopped providing student assemblies for two reasons; first we had presenters retire, and finding someone that knows both education and technology who can hold a large room full of students in the palm of their

hand is not easy, but more importantly, there are new ways to influence kids thanks to new and emerging ed tech.

More than 50 years ago if I'm not mistaken, you became one of the first undergraduates in the nation to direct a federal research grant, in this case a system to assist college students who were struggling academically that included tutoring and a multi-media learning space.

Yes, I became the first undergraduate to direct federal research along with another undergraduate, together we co-directed the project. We created the Academic Advancement Cooperative with students helping students based on their academic strengths and weaknesses, and I'm happy to say it helped a lot of students to stay in school and graduate.

And after graduation, you became a science teacher, and you were nominated for Educator of the Year on your first year of teaching.

Originally, I wanted to teach teachers how to teach science, and because I directed federal research as an undergraduate, and I was already published as an undergraduate, my advisor just said, well just go through and get your PhD.

But to me, teaching teachers having never taught, didn't make sense.

So, while I was working on my advanced degree, I decided to teach in a number of different school settings. During those early years, I taught everything from college level down to inner-city middle school.

After several years, I had an idea for a light airplane, assembled it, test flew it and in the first year I had several dozen dealers nationally. I discovered I was good at business, so I left teaching and ended up starting four companies in different fields in a short amount of time, but I missed teaching. That's when I decided to sell them and start Burrus Research. By writing books, speaking and consulting, I'm doing what I was put on the planet to do, I'm teaching.

Although you're seen as a futurist, a business advisor, and strategist, getting people to think about technology and how it can be used to shape a positive future has been a mission of yours from the beginning.

My mission is to get as many people, leaders, and organizations as possible to become anticipatory versus being reactionary. Being reactionary leads to crisis management, putting out fires and dealing with disruption and changes.

By learning to use my Hard Trend Methodologies, people can learn to predict a large number of problems *before* they happen and pre-solve them.

Let's face it. How many times have we all said, "I knew that was going to happen." My response to that is: "If you knew a problem would occur, then why did you let it happen?"

You can also use the methodology to predict disruption *before* it disrupts, turning disruption into a choice. For example, in my 1993 book, *TechnoTrends*, you could find a bold section title called, 'Blockbuster is Busted', and if you read under it, you'll read a description of what Netflix became. In addition, I accurately predicted the rise of social media and smartphones. The good news is that anyone can learn to do this!

By teaching people how to use my methodologies, they have been very accurate in their predictions and planning as well. Most important to me is not just predicting the future, it's getting people to actively shape the future, in the case of FETC, using edtech to shape the future of education—rather than have a wait-and-see attitude about technology and the future.

It sounds like you had a sense of belonging, of being amongst your own people when you went to FETC?

The two most important moments of the person's life are the day you're born and the day you find out *why* you're born. And I was very fortunate long ago

that I learned that *I was put on the planet to teach*. It's a gift that I'm grateful for.

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I use that gift through speaking, writing books and articles, strategic advising, and developing learning systems.

When I'm with educators and people in education, to answer your question, yes—I feel right at home and more connected than with any other group.

And maybe 'future' in the title of Future Education Technology Conference—did that help you lure you to speak at the Future of Education Technology Conference?

I've been very blessed that I've never had to do outward marketing for my consulting and speaking. People find me either by hearing me speak, that's how the planners of this event found me, or they read something I wrote that really resonated with them. I was very happy they called and invited me to speak at this conference!

You are a Global Top 10 Digital Transformation influencer on LinkedIn, and you were just named to the EdTech Digest Top 100 List of influencers shaping the future of education.

I was honored to see that because educators are facing many problems and it can seem overwhelming and discouraging, but new capabilities of edtech combined with anticipatory thinking can help solve many of these problems and shed light in the tunnel.

When I was in high school, and I didn't have my driver's license yet, there was a kid down the road that was older than I was, and he liked to work on cars. He was a hot rod guy that liked to soup them up. And one day he said

to me, 'Hey, you wanna go out with me tonight? I've got something new that I'm trying'. And I said, 'Sure.' And what he had done was, on the high beams of his car, meaning the bright lights—he had put aircraft landing lights—which are by the way, highly illegal because they're so bright. We went out on an old road at night with the regular headlights and no cars were around. We turned on the aircraft landing lights and *whoah!*—I could see *way* out. I could see farther than I could see things that I could not see with the regular lights.

That is what I like to do with the future.

I want us to be able to see farther down the road. I want to illuminate that, which we can see—because there are things we can't see, but there's so much that we *can* see. Like when I was talking about ChatGPT in my presentation, I asked, "is ChatGPT and AI a fad, here today and gone tomorrow, or is AI getting exponentially more powerful every year?"

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We all know AI is something that has been getting exponentially more powerful for a long time. Forty years ago I wrote that AI, as well as parallel processing, distributed computing, and fiber optics, to name a few from my initial list of twenty, will get increasingly more powerful for decades to come, and as we get out into the 2010s, 2020s, 2030s, we're going to be in the 'Holy Cow!' phase.

Well, here we are.

In my presentation I tested the audience by saying tools like generative AI and ChatGPT will definitely get more powerful every year. If you think, 'No way!' — raise your hand. And in that entire audience, nobody put their hand up. *You know why?* Because they heard what I call the future truth and they

didn't need further proof to know it will happen. That's the power of Hard Trends based on future facts!

We know that there are 78 million Baby Boomers and they'll be retiring from their current job.

Is that a fad, or is it a future fact? You know it's a future fact.

Using hard demographic trends, we know we will have administrators and teachers retiring in large numbers over a relatively short time frame. We can either be surprised by it and crisis manage, or we can predict it and pre-solve problems before they happen.

So when it comes to edtech—if we look way back to the early 80s when I first started—I made a prediction.

I said that, as time goes out, *we are going to automate and humanize education for the first time in history*.

And as we all know, we are at that point now.

When I first shared this long-range prediction, many said, 'Wait a minute, automation and humanization don't seem to go together.'

And I said, 'Oh yes they do! You automate the parts that aren't fit for humans to teach.'

For example, *trying to teach a kid how to multiply*. Well, that's hard. That should be on an interactive, self-diagnostic, game-like system that's competitive using gamification.

And then once the kid learns how to divide and multiply and do the basics of math through that system, what does the human teacher do?

The human teacher now can help them learn how to apply math to their world, to their life, or to their business. Teachers will be helping students

apply what they have learned.

Another example, if you're teaching a kid what an adverb is, that's not fit for a human. That's tough! Teaching the parts of speech using game-like systems would be much better.

The human teacher will then teach students how to write something that someone else would want to read.

I'm talking about the cognitive domain.

The lower levels of the cognitive domain are recall of information observation, things like that.

The higher level is applying, analyzing, evaluating, synthesis, creating.

Teachers have been stuck teaching the lowest levels of the cognitive domain forever. And they seldom get to the higher levels. Teaching the higher levels is why teachers went into education in the first place. They're stuck in these lower levels, and it's hard to both motivate and teach students at that level.

Thank goodness we're at this amazing inflection point with technology, especially education technology, because we can now do far more in the area of automating the lower level of the cognitive domain allowing teachers to teach the higher levels.

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What about ChatGPT? Some schools are banning it. I remember that many schools wanted to ban calculators when they finally got cheap and portable enough for students to use. Many wanted to ban using Google search as well.

Our first reaction is to ban the technology that seems to threaten us, but because those are hard trends, getting more powerful, banning never works.

If you ban ChatGPT and other forms of generative AI—all that's going to happen is, the kids are going to get a lot smarter than you, and you're going to be far less relevant to them.

Instead of banning it, since we know it will get exponentially more powerful, I suggest what we use it as a teaching tool and bring in more critical thinking, a subject we never seem to have time to teach.

The future is blended learning, human and technology, and using each in the best way to accelerate learning.

Once you see the opportunity to transform education, you can begin to see that the 'Good Ol' Days of Education' are ahead of us, not behind us—but they don't look like yesterday.

Speaking of yesterday, we've gone from little red schoolhouse to bell-scheduled rotations, and now to hybrid (both online-at-home and there-at-school) models. What would you tell education leaders is on the horizon?

We need to realize the need for human teachers. But the key is, *what are the human teachers doing?* We're human beings and we're social creatures. And there are some basics that we need to learn how to do in a world of increasing AI that is taught very well, through the human part. But thanks to AI and gamification, and other technologies that we've been talking about at FETC, we can free teachers to teach the most important higher-level things. And thanks to virtualization, we don't have to own all the technology.

12 COMPETENCIES FOR THRIVING IN AN AI DRIVEN FUTURE

In your presentation you said there were 12 Competencies needed for people to thrive in an AI driven future.

Yes, these are the competencies that are more difficult for AI to master.

1) Adaptability and agility, means being comfortable with change and even better, using change to your advantage. This involves learning how to react quickly to unforeseen changes because we will see the pace of change accelerate driven by a number of forces including technological change.

2) Anticipatory skills, which is being able to anticipate problems and pre-solve them before they happen. Learning how to anticipate disruptions before they disrupt so that you turn disruption into a choice. This involves learning to separate the Hard Trends based on future facts that will happen, from the Soft Trends based on assumptions that might happen. Education is getting disrupted. I would like educators to be the positive disruptors of education. As a side note, if people that don't know anything about education are going to be shaping the future of education, I'm worried! I think educators need to step up to the plate and start taking a more active role in shaping the future of education.

3) Effective communication. Communication is different than informing. Communication is a two-way dialog that usually generates learning and or action. Communication can be oral, written, and or visual, so learning to communicate well in those formats is vital. In addition, students need to learn to read the person that you're communicating with to understand how to adjust the communication. You also need to be able to communicate using different channels such as live, communicating to virtual teams, and using VR and AR — to name a few.

4) Effective collaboration is far different than cooperation. You cooperate because you have to, you collaborate because you want to. Cooperation is based on a one-sided scarcity mindset. Collaboration is about creating abundance for all by working together to benefit both sides. Learning how to

engage both virtual and physical collaborative teams is also vital.

5) Creative problem solving. Being able to correctly identify the problem and then learning to define, imagine, create, and invent. This will always be a very powerful human competency.

6) Service delivery. Having a service mindset and knowing the power of being of service to others. AI and robots can get the jobs done that we tell them to do, but humans can excel in an automated world with a service mindset.

7) Relationship building involves a deep understanding of interpersonal people skills. Knowing the difference between positive relationships and negative relationships and the role trust plays in a relationship.

8) Technology savvy doesn't mean you have to be a technologist. Humans need to constantly become aware of new tools that could help them or redefine what they do and then creatively apply them. You need to know if the tool exists and how to creatively apply it.

9) Strategic listening, being able to apply both active and passive listening skills. Learning how to listen is a key competency. On a personal note, as a strategic advisor working with top CEOs, government heads and even presidents around the world, listening skills have played a bigger role than speaking.

10) Emotional intelligence and empathy, in other words, to be able to perceive and manage emotions and understanding the emotions of others because we live in a human world, not just the technology world. Robots and AI are not very empathetic!

11) Selling, persuasion and influence, are all focused on creating positive actions and outcomes. All three competencies can be leaned and are vital for humans to master to thrive in the years ahead.

12) Career mastery, includes both the functional and technical part of mastery. I'm using the word mastery because I know people who are good at something, like being a good teacher. I also know some great teachers, and every now and then I meet someone who is extraordinary, a master teacher. There are many good doctors, but few are a master at being a doctor, or a master at being a nurse, or a master at being a mechanic, versus just being capable. Every career has both a science side and an art side. We usually learn the science side in school and the art side after we graduate. Increasingly, tech including AI will cover the science side, human teachers will increasingly cover the art side.

If students don't see how to apply what they have learned, they didn't really learn it and I'll bet they were not that interested in the subject.

Years ago I interviewed Alan Kay, the famed computer scientist and he surprised me. We were talking about civilizations and the Greeks and Romans, and I asked him, 'Will we ever make it to a Golden Age again?' He said, 'We're in one right now.' So—and I know in the world there's uneven distribution of wealth—given all that, do you think we are in a Golden Age now?

We are in a Golden Age right now, but you have to see the opportunities both now, and in the years ahead to believe it, and most importantly, act on it, or you will miss it.

If you think, *'This is the worst possible time to be around, ever!'* and, *'Boy, am I glad I was alive years ago—because the future looks bleak'* —then I worry about your future, because of a principle I started sharing decades ago, *The Futureview Principle*.

How you see the future shapes how you act in the present, and how you act in the present shapes your future. Your future view will determine the future you!

Most people's future view is based on the past or present and projecting that into the future.

Because we're at a unique, Golden Era inflection point in history right now, looking in the rearview mirror instead of looking through the windshield can get you into trouble.

If we start realizing that, 'Wow, there's all this opportunity, there are tools to solve problems and create a better future, we will end up with a better future.

We've shifted from a time of rapid change to a time of transformation.

Change always comes to us from the outside in, forcing us to react, crisis manage, put out fires.

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With that said, I don't want us to change education because that's *reactionary*. I want us to be *anticipatory*. I want us to actively transform education!

Look at the transformative tools we have in front of us right now. Some of them are free and they do amazingly powerful things.

A key to becoming anticipatory is to understand how to use trends to lower risk and move forward with confidence. Most don't spend much time on

trends because some happen and some don't, not to mention things are changing so fast. And, there's no shortage of trends.

I've come up with a methodology over the decades to solve that problem. All trends fit into one of two categories:

They're either a Hard Trend based on a future fact that will happen, which means it can't be stopped, or it's a Soft Trend based on an assumption that may or may not happen.

Putting trends into one of those two categories is really powerful.

The second important thing to do is to tie an opportunity to the trend, because when you tie an opportunity to the trend, it bursts into life.

There are three categories of Hard Trends and one of the biggest ones was technology, because technology lets you turn the impossible into the possible.

The second category is demographics. For example, is it a Hard Trend or a Soft Trend that we will have many teachers retiring over the next three years? As you might guess, it's a Hard Trend. Look at their average ages. You know, people are retiring. That's not going to stop all of a sudden.

What's the *opportunity* of that hard Trend?

Districts should be capturing some of their knowledge and wisdom through mentoring and other programs so that when they do retire, they don't take all of their knowledge and wisdom with them.

What advice would you give to an edtech startup founder—someone assembling a technology company working to improve learning for students—whether in K-12, higher education, or workforce learning?

My advice is to list the Hard Trends your products are based on and the

problems they solve. In addition, use those Hard Trends to see problems before they happen so you can pre-solve them to move forward faster.

Next is to use your Hard Trends list to identify disruptions before the disruptions occur. Remember to look at all three categories of Hard Trends: *technology*, *demographics, and regulations*.

Usually there's funding involved to promote a regulation. So, look for funding opportunities in all regulations.

Look at your Soft Trend list as well because the opportunity of a Soft Trend is that it can be changed. What Soft Trends in education do you want to change for the better?

When I look at a lot of the problems in education today, even though they've been going on for a long time and are continuing to be a problem, most of those are actually soft trends, not hard trends.

I want edtech companies to become *positive disruptors*.

'I want edtech companies to become positive disruptors.'

Notice I didn't say a negative disruptor. Negative disruption happens to you. A positive disruptor *creates the transformations that need to happen to elevate relevancy and accelerate innovation and results*.

As I said earlier, I think the good old days of education are ahead of us.

But that's a soft trend, it's not a future fact. The hard trend is the tools are there to truly transform education. And if we don't do it, someone else will.

What's the soft trend? Will you use edtech to transform education in your school district?

If you're creating something that will transform how educators do what they do—Ah, now we're talking about something *really* good.

Most people might remember the Blackberry. What did Blackberry do? They created a mobile device that allowed us to do email and answer phone calls. That was a change. That was not transformation.

When the iPhone was launched, what happened? It created a transformation because now you had a camera, you had video, you had GPS and a phone and much more, it was a transformative product. So are you just changing something or are you transforming it?

My advice is to spend one hour a week as an opportunity manager, identifying the Hard Trends shaping the future and the related opportunities. Identify the Soft Trends that might continue and the opportunity to change them. Then take your list of opportunities and narrow it down to a few Must-Do opportunities and then act now!

Well, I have to say you, you're a master teacher on the most important subject of all: the future. I'm actually in the middle of your book right now, The Anticipatory Organization, and I'm really having fun with it. And I really had fun talking with you and maybe we can do some follow up sometime down the road.

Absolutely. And the book before *The Anticipatory Organization* was called *Flash Foresight: How to See The Invisible and Do The Impossible*. In that book, I talked more about my experiences in using these principles in education, I think you would like that one as well!

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