Hi and thank you for tuning in today. My name is Seth Gerson, and I'm Program Director for K12 Education, here at the National Governors Association.

Welcome to our conversation today with Andreas Schleicher on global trends in K12 education, including trends on academic recovery and support, student mental health and well-being and educator recruitment and retention.

Please note that this recording is the latest in a series of 10 other NGA webinars, designed to help inform Governor and state strategies for addressing K12 student needs, all of which are available on the NGA K12 Education webpage.

Today, I'm honored to engage in a conversation with Andreas Schleicher, Director for Education and Skills and Special Advisor on Education Policy to the Secretary General at the Organization for Economic Cooperation and Development or OECD. Andreas has worked for more than 20 years with education leaders around the world to improve quality and equity in education. Before joining the OECD, Andreas was Director for Analysis at The International Association for Educational Achievement. With that introduction, let's dive into the conversation with Andreas.

Andreas, just to start foundationally, please tell us about the OECD, the primary focus of your recent work and the trends you're seeing within K12 education, globally.

Thanks, first of all for hosting me. And yes, there, our work at the OECD, really focuses on tracking educational progress globally and then distilling lessons from that for public policy, what we can do to have students learn better, teachers teach better and school system to work a lot more effectively.

Now you may have heard about our PISA assessments, this is the kind of global NAEP, where we look at the knowledge and skills of students and those are the kinds of measures that we use to track educational progress.

But then we add value to those data through in-depth analysis and policy research.

Your question on global trends is perhaps harder to answer. On the one hand, you know, you can see education progressing very differently in different parts of the world.

Think of, you know East Asia or Northern Europe, basically racing ahead, becoming rapidly improving education systems. And then they see other countries starting to fall behind. And you see some countries closing equity gaps in, and then others those gaps are widening, and you see some countries, you know, delivering great value for money, while in other countries, actually seeing high spending only produces moderate results.

So those trends are very hard to distill globally, but education is also facing interesting common challenges these days, and that's perhaps where global trends are more clearly visible.

You know the pandemic has woken up our analog school systems to the digital world, and that is radically transforming learning and so you can see many countries actually looking at how technology cannot just conserve existing practice, but truly transform it. I think that's a clear global trend, accelerated through the pandemic.
And then you can see countries, you know, in the wake of you know, GPT for those systems, countries thinking harder, you know. How do we complement, not substitute the artificial intelligence created in our computers?

So there are some global trends, but also really lots of interesting different patterns that, you know, make the world a really interesting laboratory for different policies and practices.

[Seth Gerson]
Yeah, I really appreciate you providing that introduction, and we'll get into all of it as we sort of move forward in the conversation with the digital skills.

A lot in this country was spent on the devices and connectivity and internet access for connecting students during the pandemic. So, as you said, countries it sounds like worldwide trying to figure out how do you augment in person learning now that students are back in school and really use that technology to harness learning and moving forward.

Last year in that vein, OECD I know, released two reports: Building the Future of Education and Education at a Glance 2022. What were the major findings of these reports, and sort of that forward looking way like you were saying, of where countries are trying to go post pandemic in particular and the implications you would think for K12 education here in the US.

[Andreas Schleicher]
Yeah, you know the publication, Building the Future of Education, looks at the frontiers that education faces. You know demography and probes in terms of technology in terms of, you know, pressures on education, systems of various kinds has a more conceptual piece.

And then Education at a Glance puts up lots of empirical data. It really looks at their resources invested in education, and then also the kind of economic and social outcomes that you know are tied to investments in education.

When it comes to resources in education, for example, Education at a Glance shows that the US has a lot of financial means at its disposal now, clearly, you know, at the university level of education, the US leads the world by a large margin when it comes to spending per student, and that creates a lot of possibilities for universities and also the economic level market outcomes of a college degree in the US remain really good, but, you know, the same data set also shows that high spending has its downsides.

Now the financial barriers, tuition for students to go to university in the US have become high, maybe prohibitively high for some students, and that may explain why the share of students going onto university in the US has not grown as fast as it has in other countries over the last years, and actually the US has fallen quite a bit back in in the ranking on that.

So resources are also quite good in school education in the US also, even though you know Education at a Glance shows quite a bit of variability among the US States, on that, and here the publication raises more questions about the effectiveness of spending choices.

Now, on the one hand, you know, spending for every school student is quite high in the US, but, on the other hand, you know, teacher pay in the United States is far from competitive, at least when compared with other countries, and also similar jobs with similar qualifications, and then on top of that teachers have, in the US, a lot less time for doing other things than teaching, again, compared internationally. And the reason for that is that you know the very high level of overall spending doesn't arrive in the classroom.
That's sort of a feature where the US is different from, you know, countries like Japan, where you know most of its spending actually is directly related to instruction.

And what the US can really learn from some high-performing education system there is that, you know, it's important to prioritize the quality of teachers over things like, you know, the size of classes that have quite a lot of attention in the US.

It's really about, you know, improving productivity in education and instructional core. That's at least where the attention in most high performing systems has come. That's what Education at a Glance tells us.

Another area where probably the US is large scope to improve concerns the earliest years, early childhood education and care. What you can say here is that Education at a Glance shows us massive progress around the world. Basically a decade before, you know, a minority of 3-year-olds would be in some kind of, you know, organized education childcare, and in education today, you know, it’s in the order of 70-80% in most countries.

And that's really an area where the US has invested a lot less and it's now looking differently. So Education at a Glance really is about looking at what do we invest in education, and what are the kind of long-term economic and social returns?

[Seth Gerson] That's really helpful. So really painting the picture of the funding that's available in the US, but how it's spent in comparison to other countries and where you put the prioritization in terms of really thinking about the teachers and impact that has on the students and not looking only at the classroom level, but making sure that instructions there, and like you said on the college matriculation being able to get into college and be ready for college as well as early childhood education on the front end to make sure that you're looking at all your systems, and how they work in tandem and how to spend those dollars effectively to get the most bang for the buck.

In terms of what you mentioned earlier around the PISA report, the Program for International Student Assessment, that comes out regularly, I know you also at OECD work on the TALIS report, Teaching and Learning International Surveys every few years, why are these important for state education leaders or Governors’ offices to pay attention to here in in the US?

What would you say for the last surveys that were given would be the highlights, the key findings, the takeaways from those results for the 2018 surveys and what do you expect for the upcoming ones in the future years?

[Andreas Schleicher] Yeah, you know again, with Education at the Glance, we look at the investment in education. With PISA and TALIS, we study the outcomes. At the end of the day, you want to know what students know and what they can do after 10 years of study and that's exactly what the PISA study does with a very similar methodology to NAEP.

So it's basically an assessment that we run the difference to NAEP in the United States, NAEP is done in the United States and PISA done in almost a one hundred countries.

Now, basically, it's a very powerful way to compare the outcomes of education on a global scale. So you can actually see how different systems perform. And PISA doesn't just give you an overall assessment of learning outcomes, it tells you how student performance plays out, you know, against social background or gender or geography, and that also offers really interesting perspectives for policy.
Now, how do students from similar social backgrounds end up with different outcomes across systems?

One striking feature from an earlier PISA survey here was that the 10% of the most disadvantaged 15-year-olds in the province of Shanghai in China had outcomes that were as good as those of the 10% wealthiest 15-year-olds in the United States, and that really shows us that poverty need not be destiny.

There was a country or a system that had, you know, massively invested in attracting the most talented teachers into the most challenging classrooms and providing really every learner with excellent learning and then delivered on the outcomes. I really think those cross-country comparisons tell policymakers what is possible. They can, you know, lower the political cost of action by, you know, providing ideas, and, you know, support what you can do.

And they sometimes increase the political cost of inaction by actually putting more pressure on systems to deliver better value for money.

And TALIS, a different survey looks at all of this through the eyes of teachers. It asks teachers what makes their job attractive and again how that compares across countries.

You know, in the face of teacher shortages these days, a really important question, you know, intuitively, you might think, well, that's all about salaries, but you can see a country like my own, Germany, that pays its teachers really, really well, comes second in among OECD countries, and still has struggles, you know, a lot with teacher shortages.

And you can take a country like Finland where teacher salaries are just so not great at all, below the average in the OECD, but you have 10 applicants lining up for every teaching job, and what this tells us is that, yes, it's important to make teaching financially attractive, but even more important to make it intellectually attractive, offering teachers interesting and rewarding careers, you know, creating opportunities for professional collaboration. All those kinds of things are what we learned when we study the world through the eyes of teachers.

So you put all of these different perspectives together, you know the student perspective from PISA, and the teacher perspective from TALIS, a system perspective through Education at a Glance, and suddenly you can see how education functions in different contexts.

[Seth Gerson]
That's really helpful context. And particularly, when talking about the TALIS survey and how it's not just financial incentives, but also the professionalism pieces of you know, having the ability for teachers to grow professionally.

And you know, looking at that retention vehicle of not only how you're bringing teachers in by hiring, you're able to keep them and leadership positions to lead other teachers along the way.

It makes me think of to those who may say well, you know United States is so different of a system from some of those countries you mentioned, how do you sort of answer that, as to, you know, really important to look at, and to take some of these pockets of information as snapshots as really being able to import onto the US system?

[Andreas Schleicher]
Yeah, you know, all students are different. Classrooms are different. Countries are different, but actually, what we can use international comparisons for is how those differences actually play out.

For example, we can study students from a similar socio-economic background and look at their performance across countries.

We can look at the relative share of students who have an immigrant background and see how they come out.

So, once you start to slice the data through different lenses and perspectives, you can actually achieve meaningful comparisons even among systems that on the surface look very different.

Now, when you do that actually systematically, and you do that over time, you actually find that much of what we see, you know, to be unsurmountable differences in my systems actually, you know, turn out to be minor nuances.

I give you an example, on the PISA, you know assessment, you can statistically account for about 78% of the between school variation with the data that we measure. It still leaves, you know, a little bit of unexplained variability.

But it shows you actually that the fact that what drives success internationally are remarkably common, that's one of the lessons that we learned from PISA.

If you ask yourself, you know what makes you know education systems in this context succeed, you always come to very similar kinds of findings. It is about setting high aspirations. Most high performing education systems, you know, wherever they are located on the globe, in whatever context they operate, you know, are very ambitious when they said, you know student expectations have, you know, highly pitched, you know, national standards curriculum, or whatever they are very good in aligning resources, with needs.

Some spend a lot, you know, like the US. Some spend very little, but what they typically do is they make sure that the resources act where they can make most of the difference.

And you can see that those systems typically make teaching very attractive.

I think they get, you know, really bright people into their teaching profession, they develop them to become effective teachers, and they keep them in the systems and they give them opportunities to actually redefine and contribute to their system.

So once you study actually those factors, you'll find that you know what looks different on the surface may not be so different when you actually look at this entire terms of policies and practices.

And that's why, you know, I believe there's a lot that we can learn by looking outward.

[Seth Gerson]
A lot more similarities than differences once you dig into the data, that's really helpful.

I want to pivot to we're just emerging out of the pandemic, Governors’ offices are still grappling with the impacts of that, probably for multiple years, for students and staff. I know OECD has done a series of reports, webinars on the impact of COVID on education systems across a range of countries.
What would you say were the top lessons learned from how countries responded to the pandemic, and what innovations and promising practices from it would you recommend to build out now the students are back primarily in in classrooms? Any countries you’d point to particularly?

[Andreas Schleicher]
Yeah, obviously, you know, this has been an incredibly interesting period, for you know, education, evaluation and research and analysis.

And on the one hand, you can say that the COVID pandemic has, you know, deeply disrupted learning and cost, you know, huge damage to students, particularly for some disadvantaged backgrounds.

At the same time, it's also been a time of extraordinary, not just technological, but also social innovation in education.

I think sort of that is what we will remember from this period.

The first lesson, of course, is, you know, that school closures have been extremely damaging, particularly for students at the lower end of the social economic spectrum.

If you came from a wealthy background, you found many ways around closed schoolgrounds.

That's the good part. But students from disadvantaged backgrounds really were hit very, very hard. They had very few alternatives, they remained shut out when the schoolgrounds closed. Clearly countries that never closed their schools or closed them only to a very limited extent, where I think about Sweden or France in Europe, they had a huge advantage.

Counties that had long school closures, and the United States actually belongs to that, at least most States in the US, according to our comparison, you can see sort of a trace of that in national assessments, and so on.

Second, you know, we saw a lot of variability, how rapidly education systems adapted to the new digital world.

And particularly how countries use technology not just to conserve, you know, existing practice, but really transform it to do things differently.

Now, you could see artificial intelligence, you know. Before nobody talked about it in education, and suddenly you could see, you know, AI based learning systems, studying how you learn mathematics and then make your learning experience so much more granular, adaptive, interactive. You could see the emergence of learning analytics, telling teachers how different students learn differently.

And those systems existed before the pandemic, but they are only used very sporadically, and often, you know, that pandemic has increased social acceptance for new solutions, new platforms, that we didn't have before. That's, I think, a real transformation.

Also, before you know, we invested a lot in training teachers to use technologies, with actually quite limited success.

And then again, you know the pandemic, suddenly teachers were ready. In most countries, actually, teachers showed remarkable skills to actually cope with those kinds of difficulties.
So one takeaway from the pandemic is also that actually, education systems can change now, it’s just what people often don’t believe in the field of evaluation assessment, one of the consequences during the pandemic was that many traditional assessment systems that are place based broke down, and that left, you know, some students in the first year without, you know, without the right certificates, only substitutes for that.

But again, you know also here I would see the pandemic is a game changer, you know.

I would say, you know what historically one of the biggest mistakes that education ever made was to divorce learning from assessment.

If you go away back in history, you know, we always saw learning and assessment as two sides of the same coin.

We launched through apprenticeship, we learned from people with people.

They always gave us feedback. And suddenly, you know, those things became separated.

You pile up years and years and years of learning. And then one day they call you back to do your test, or your exam in a very artificial contrived setting, and that you know divorce between learning and assessment has created many of the challenges that we see in education today making learning more superficial, creating pressures and so on.

Again, technology suddenly is reintegrating learning and assessment by giving students, you know, interactive feedback and appraisal, giving teachers you know, learning analytics.

So again, I think the pandemic has been a really good game changer.

The third lesson, I would say, perhaps one that is harder to quantify, but I think the pandemic has shown us that learning is not just a transactional business, but truly a social relational experience.

So the role as teachers, not just as instructors, but as coaches, as mentors, as facilitators, as evaluators, I think it’s really come into the center.

So in one way, you can say actually, the status of the teaching profession has been truly elevated from that.

So I think again, you know, lots of you know issues.

Hybrid learning clearly, is there as the new normal, not something that we might not have thought of before the pandemic.

And then last, but not least, and I would add, the ownership of our learning, you know, in the past, you know, learning again was quite transactional. Students sit in the classroom absorb sometimes, you know, prefabricated content.

And now students take greater ownership over what they learn and how they learn and where they learn and when they learn.

So Singapore was the first country that quite consciously, you know, designed an offline learning experience in this school week, so that students actually take more responsibility to design their
own learning, pursue their own learning goals and so on. So actually, I think lots of really really interesting experiences that we at the OECD have quite systematically tracked.

[Seth Gerson]
That's such a great overview and list, thanks Andreas.

So really thinking about the impact of the school closures, particularly for disadvantaged students. I heard you talk about the role of technology and hybrid learning and what we can learn from there, the innovative solutions that came out of how education systems can change during a time of great change, the value of assessments, and really seeing the feedback, what we can learn from assessments around relationships that we know are so important, the status of the teaching profession, and then, as well as student agency, during these times. All great lessons learned.

I want to read issues in particular, that Governors’ offices are grappling with right now, and big buckets are academic recovery and support, students and staff well-being and educator recruitment and retention.

So I wanted to do a little bit of a dive into those three issues and what you're seeing across the globe.

In terms of academic or recovery, what impact did you see from COVID on student learning across the globe? And how are different countries working to effectively address the remaining learning gaps and lost instructional time?

[Andreas Schleicher]
Yeah, again, you know, the most of the differences you can simply explain with the links of school closures.

Countries with limited school closures, I've just seen a very small dip in academic outcomes, sometimes not even.

Second, you know, we saw usually a greater dip in secondary education than in primary education, because you know, the home environment was more conducive, parents have an easier job explaining and helping their primary kids in learning than in secondary schooling. So there's like some common pattern.

In terms of recovery, what we have perhaps learned, is this just adding time doesn't help much.

Really most of the successful recovery strategies are really about, you know, raising productivity, individual tutoring, you know, new technologies.

That's really this, the kind of personalized approaches. What we also saw is that many students, particularly in countries where school closed for long, got socially disconnected from learning and keep in mind that you know, often school is not just a place where you learn but also a more a very stable place for social development, and it took actually quite a bit of effort in many countries to recuperate those kinds of social and emotional losses.

But again, you know, you can see many school systems are now back on track, and that shows us really that these issues can be overcome, but it requires targeted efforts.

Most kind of, you know, universal interventions have been less promising than the kind of type of interventions that we've seen.
Thank you. Really helpful, we've seen a big interest in the tutoring you mentioned that as a place.

How are other countries using sort of their summer or after school time? Do you think about it as sort of separate or as just another place of learning? How do they connect it to the regular school day, and as another way to work on this recovery time?

Yeah, again, you know, for some countries that was not such a difficult experience.

You know, actually often school, is a very important social space.

So there are a lot of opportunities for teachers to engage with students, and I would say, that's probably one of the big differentiators to the United States.

In the United States, if you are a mathematics teacher, you teach mathematics.

If you are a teacher in Japan, and China, in Estonia, you'd spend, you know, a big part of your school day working with students outside the classroom setting. You know you are also that coach, their mentor, you know not only your field of your discipline, but you actually have a very good knowledge of who your students are who they want to become, how you can accompany them, and that is sort of scheduled time for that.

And then in a pandemic that is a huge help, because suddenly, when the students are not in front of you, you need to understand how different students learn differently. And so, in a way, I think that has helped those systems where you had more social spaces in schools, it was easier to activate them.

Same for communities, also there, I think those kind of interconnectedness really has been a major asset for countries.

Really helpful and you know you're mentioning really knowing students, not only academically but holistically.

And that's really a core Governor focus as well right now of student mental health and well-being, I think it really leads into that.

I know that OECD has done this social emotional skills survey for a number of years.

What would you say countries are using to address students’ social emotional development particularly well and how would you say they're doing so?

You know, perhaps the most important lesson that we have learned from the Survey of Social, and Emotional Skills is that we shouldn't put, you know, academic success and mental well-being at sort of opposing ends of a long spectrum, that they're really two sides of the same coin and in fact, their data show how closely related mental well-being and the academic success of students are.

Now often we have this idea, wow, you know, we should make things easier for students and then they will be happier.
That's absolutely not what the data show. Actually, the more the greater expectations the system has for students’ success and the more support students feel, the better the outcomes on both sides of the spectrum, the academic side and the mental well-being side.

What was also really interesting for us to see is that the best predictor for mental health and social emotional outcomes was actually the quality of student teacher relationships, again, where students perceive my teacher understands who I am, who I want to become. They support me in my, you know, in my individual learning goals.

Those students are happy students, and they are also the high achieving students.

So again, putting the quality of relationships first, putting the development of character, social emotional development on parts of academic development is really it's the synergies between those two dimensions.

One of the concerning findings for us, that for many students actually, mental health declines a lot when we measure that at age 10 and age 15, we saw a big dip particularly for girls and some say, well, you know, social psychology has explanations for this when students get older they become more self-critical, more self-aware, and so. But actually, if that is true, even if that is true, if we know that, shouldn't we design schools more about those learning experiences? And that's something I think we took away from this.

So again, you know the environment that schools built, you know the expectations they place on students, the support, they give, the quality of their relationship, all of those are ones that we should not see as you know, extraneous factors, but they should be an integral part of the academic development of students and I think that's really, I think, what for me and many of these findings, were a lot more surprising than the findings from our achievement surveys because we are just much less aware of those.

On mathematics and science, we have lots of data sources. We keep them on the radar screen, but on social emotional development and it's not just, you know, mental health, you can also look at, you know, curiosity, you can look at persistence, you can look at you know, self-concept to what extent you know self-efficacy, what extent, emotional resilience, and you can see pretty much the same picture for all of that, that you know where students feel well, in themselves, where there is an environment that is, you know, productive discipline, classroom climate, actually, all of those outcomes, including the academic ones tend to be strong.

There is a lot, you know, that school can do to shape those social and emotional outcomes, in addition to the academic ones. We often take ones to do with, you know, family and friends of course that's true, but actually, there are many levers through which school can actually positively influence the well-being of students.

[Seth Gerson]
That's great to hear and I really I like the way you're framing it, and makes so much sense of always thinking about the interrelationship between the academics and the well-being, the mental health, the holistic needs of students, there as you said two sides of the same coin and that'd be thinking about that interrelationship at all times.

Another interrelated area, all of these are, is certainly educator, recruitment. I know you've written a number of years around teacher professionalism. What can Governors and states learn from other countries on key strategies for strengthening their educator recruitment or retention systems?
Yeah. You know again, the first lesson for me would be to offer people interesting careers.

Now the attractiveness of the profession is not determined by pay levels, at least not when you look at this internationally. It's usually determined that the profession is intellectually attractive, so it offers people interesting diverse careers, that it rewards excellence in performance and that it has differentiated pathways.

If you go to a country like Singapore, that is doing really well on that, you know, the first day you become a teacher in a school, your school principal will ask you, what do you want to do in your life? You want to go into management? You want to go into leadership? You want to go into, you know, pedagogy? And then from then on you continue to work on your career.

Most teachers there, while they teach, would continue to study, to develop you know themselves, and I think that's a really big driver of teacher professionalism.

Second, we see that combination of a high degree of professional autonomy and a collaborative culture is really, really key, that teachers are, you know, creative designers of innovative learning environments that they work, you know, there's a there's a high degree of confidence and trust, from their societies, but also making contributions to the profession.

Again, I think there's a lot that we can learn from Asian education systems where basically you take it for granted, you know, if every week you will do your model lessons and you can post them on a digital platform, and actually, the more other teachers will download your lessons, criticize them, use them, improve them, the more you get recognized in the profession. And at the end of the school year your school principal will not just ask you what's the achievement score of your students in the class, but what contribution did you make to the profession? How have you shaped the lives and careers of other teachers? How have you mentored them?

So that collaborative culture high degree of professional autonomy, that combination I would put, you know, as a second dimension of success, and again it shows us that public policy can actually do a lot other than through financial needs to shape the attractiveness of the profession, and that also ultimately determined the social status.

Now we see across countries huge differences in the social status that teachers have.

And you can ask yourself, you know is the social status an input, or is it an outcome?

And I would actually say, from our analysis, it's very much a design feature of the education system.

Yeah, really thinking beyond compensation. And, as you said, the societal support, the social status, as you said, of what the profession is viewed as that, in itself is an attractiveness driver.

And then you know, you mentioned professional autonomy, collaborative culture as other important factors, and I appreciate you doing so.

Always like to end on an optimistic note. In particular, so as you look ahead, where do you see your work headed next? What are you most excited about?

[Andreas Schleicher]
Well, these days, you know, I think, artificial intelligence pushes us to think harder about what makes us human.

You know we've seen that the kind of things that are easiest to teach and test are precisely the things that easiest to digitize, and I do think that creates a kind of healthy, you know, environment for education to reinvent itself you know, to look at the purposes of education. What is going to make young people successful in their future, not just our path.

So we do a lot of research, anticipating the evolution of skill demand, and then thinking through what implications could that have, you know for correct because in curriculum design, curriculum development, instructional policy, teacher education and so on so that's you know one strand that actually, I think, is absolutely fascinating.

And the second part also has to do with technology. How do we use technology just, you know, to enable new types of pedagogies, to look at new kinds of learning experiences and making learning more personal, more interactive, more granular, more participative?

Why would you listen to a teacher explaining to you the design that the results of scientific experiment when you could do that yourself in a virtual laboratory?

These days, now I also think you know teachers will become, you know, data scientists can actually now, study how different students learn differently.

And then, you know, embrace that diversity is a much more differentiated pedological practice now seeing again how that you know what gets transformed from just being an instructor to becoming really a good, you know, coach a good mentor, and all of that.

So that second part of how to use technology and education is equally exciting.

And if you put the two together, you know that's the future of education.

[Seth Gerson]
Well, it's a great way to end our conversation, really, but you know, harnessing technology for the impact on the future of education, the future of learning and the future, of work, very much as you've encapsulated.

So, well thanks, Andreas for a great conversation, and thank you for sharing your expertise, your insights today.

Viewers, please note that all the reports and resources that we've discussed today during this webinar will be attached to the recording once it’s posted to the NGA website.

But thanks, Andreas again, and until next time, thanks for joining us, and have a great day.