2012 Annual Conference National Association of Independent Schools
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Transcript of Q&A Session with Bill Gates

BERNIE NOE:
Bill and I are going to sit in these cocktail-esque chairs and this is an opportunity for everyone here today to ask any questions of Bill that you would want to ask. It could be about his presentation, it could be about something other than his presentation.

And he did say to me that if you question the assumptions that he's making about education, if you question some part of the technology that he's just been discussing with us, then feel free to question those assumptions.

So, there will be three microphones that we'll be circulating, and there will be paddles, and if I can see them I will call on one of the paddles.

And I'm going to begin with a question that I think is relevant for all of our schools. And Bill knows that this is an audience of independent school educators. We're all well aware that Bill started one of the world's major corporations, and one of the world's major foundations. Congratulations with that. Done moderately well, I think we could agree. But my question on behalf of all of us is, what skills, Bill -- we talk about 21st century skills, it's one of the buzzwords in NAIS schools -- what skills do you feel our students will need entering the workplace either in the nonprofit sector or in the commercial sector?

BILL GATES:
Certainly the idea that you can go online and find a lot of information, and that yet some of that information is accurate, some of it's inaccurate, you have to be really quite expert at using different tools to figure out that. So, the basic ability to use the latest software I think will be very, very important. In fact, a huge value to organizations is that young people come in and they're much more up to date, and it kind of reverses the normal hierarchy that they are showing the new techniques and new approaches.

I'm also hopeful that this ushers in the idea that the boundary between school and the workplace is not quite as black and white. I mean, during school you're used to being confused on things that are kind of utterly foreign to you, and you kind of persevere through, and then I think a lot of adults, because they don't have access to learning materials, they sort of get in the mode of, okay, I know what I know and if something new comes along, it's like no, no, no, that's the stuff that I never got around to when I was a student, and so I'm not ever going to learn it.

BERNIE NOE:
We never find that kind of inflexibility in our schools, I just want to say.

BILL GATES:
Because of the dynamic nature of innovation and science and the pace it's going at, and the fact that there will be great material, hopefully it will be more typical to say, no, I want to go online and watch a four or five hour course about what is renewable energy, I mean, why is it hard to make it inexpensive, and is there any rationality to people who disagree with this as a big path. Certainly we need for the complex issues society faces that these tools help us get more informed.

BERNIE NOE:
Okay, we are ready to go with questions. If you could raise the paddle, I'm going to call on paddle three if you have someone. Please come to the microphone and speak.

QUESTION:
Good morning. As you look forward into the future in your vision for 10 years from now for technology in schools, what are the implications for the bandwidth and infrastructure that schools are going to need in order to support all this?

BILL GATES:
The bandwidth needs will be quite significant, because if you imagine, you know, say you're an institution with 500 students, and if at any one time 20 percent of those students are on watching video type bandwidth, then you're going to need several hundred megabytes of speed coming into the school.

The good news on that is that of all your technology expenditures, that should end up being a very small part of it.

Now, some of you are -- I should add a footnote here, which is a pretty important footnote. The answer I just gave really is about those of you in urban areas. As you move out to more and more rural locations, you know, take an extreme like some of the Indian reservations in the United States, the availability of bandwidth and the cost of bandwidth is very high. So, in that case it may end up being a meaningful part of your technology budget that you have to afford that connectivity. As you get closer in, it's going to be well under 10 percent of the overall budget would be for the connectivity piece.

QUESTION:
How do you suggest moving forward that you get -- I mean, I don't think it's a problem to get students onboard with all of this change, but parents and teachers who are so used to one way and so familiar and having in a general sense success with this one way of doing things. How do you suggest getting people onboard who might be resistant?

BILL GATES:
I think this getting people onboard is a big challenge, because there are so many constituencies, and let me just take parents. I'm not trying to suggest they're a particularly backwards constituency but they're just one of many. You know, they know how they were taught the subject, and they know that they were totally focused on their homework and they weren't doing multiple conversations while things were going on. You know, even setting policies for kids, you know, should you let kids Skype during their homework; well, how do you know what they're doing, are they really talking about the subject? It's a big challenge for parents, because they don't have any experience with this, and it will feel very unfamiliar to them.

And particularly if you get parents who are kind of conservative about, hey, it's not broken, let's leave it alone, you get some teachers who feel less comfortable about these things, and then you'll hear about somebody who went too far and tried something out and it didn't work well. This is going to be sort of two steps forward, one step backward.

The idea that you start socializing the idea that, hey, technology is important over a 10 year period, and you gather parents together and start to talk about it, we're going to require that everyone have a computer, here's how we're going to make that work, do you tell people two years in advance about that, do you have a really good plan for the kids who it's not that affordable, do you let some teachers talk about how they think that there could be some negatives? Do you let the kids type on them during class or not, do you block certain websites or not? You'll be pulled into quite a bit of challenge.

So, I think my biggest answer is A) plan ahead, B) pick the teachers who are particularly open-minded and give them full rein a soon as possible, because it's their success. They'll see that the kids are flocking to this new approach, and teachers, parents will realize, hey, at the end of the day, the students are the ones who know what kind of learning works for them, and if you can't have them enthused and embrace this stuff, if you literally stick to the chalkboard, the contrast for that student between what's happening at home when they're playing the Kinect and being online and simulating things versus the in-school experience, it's going to make the learning part just seem so dull.

So, as many experiments as possible and planning out in advance, and mapping through the different constituencies, and assume they're going to be tougher on you on this than you might expect.

BERNIE NOE:
Bill, just as a quick follow-up, do you find both at the foundation and in your work at Microsoft that people are all early adopters or do you find the same kind of resistance as that we find in independent schools?

BILL GATES:
There's a lot of resistance to change. Education has been done pretty much the same way for a long, long time. There are always a group, and it tends to be younger teachers, not entirely but somewhat, who really do want to use this stuff, they care a lot about it.

And so if you look at the traffic on something like KhanAcademy.org, which amongst all those that's one everybody should play around with just to get a sense of what's there, even if you're not going to incorporate it wholesale.

You need to pick who your early adopters are, but they will be at most 20 percent of your population. There will be 60 percent that's kind of open-minded, they've heard a few negative things, they want you to take those negatives head-on and really address them. And then there may be 20 percent who simply aren't ever going to make that transition, and over the next 10 years are they the right people to be doing this work or not, and it's hard to say.

QUESTION:
What do we do as educators to bring about a shift in the publishing paradigm from paper to digital sooner than later?

BILL GATES:
Well, a lot of the paper in education is the textbook and the homework, and it'd be interesting, I've never seen somebody actually try and go out and do a metric, there are a lot of classrooms taught -- classes taught without a paper textbook. My exposure is anecdotal enough; I'd love to see a statistic about that. You know, I'd say at Lakeside there's quite a few who they've gone away from a paper textbook.

Another project I have is a new kind of high school course called Big History, and that's being created entirely without a paper textbook, where we just have online text and really very cool videos and timelines and things. So, it's been crafted that way from the beginning.

CK12 you saw is a website that has open textbooks, free textbooks that are really quite good, and they'll have Common Core and all the different things people might want.

The big leap of faith, though, is that your students have the device, and so you have to come up with something that makes sure that device availability is very, very good. You know, the devices break and everything, you've got to get used to that.

So, getting rid of the textbook and having homework handed in electronically, we are at a phase where that should happen. Having the class schedule and the notification of when things are going to happen, expecting parents to go up online to see those things, you know, we must be at a point where a number of schools can just take the leap, you know, grades that you issue, you know, have the parents come up and see the grades online.

A ton of that paper you can get rid of it now, and you're going to get rid of it eventually; that is, because of the interactive nature of these future textbooks -- it's not just about saving money, and that's actually you won't save that much money, because your new costs will replace what you save, but those new costs are the enabling factor to do things in a far better way. So, it is worth starting down this path.

QUESTION: Hi. Bill, first off, I just want to say thank you for being here today. We all value your opinion greatly.

My name is Clark, and my question relates to the difference between technology in education and personal direct interface with a human being. So, obviously as we all know, technology is shrinking the world, and you provided a number of examples, really fantastic and innovative examples of that. But, for example, yesterday I flew up here from Bogota, Colombia to be able to sit in this room. And I was in the back, and I'm watching you up on the Jumbotron, and I was like that's Bill Gates, and I'm loving what he's saying, but then I thought, but wait, he's here in this room, and that's really important to me. So, I'm wondering what's your opinion on the value of that.

BILL GATES:
The difference between technology in education and --

QUESTION:
Well, we know that technology has the ability to shrink the world relating to education.

BILL GATES:
Right.

QUESTION:
But it's not a personal interaction. So, I'm interested in your opinion on the value of that personal interaction.

BILL GATES:
Okay, great, great.

Well, yeah, the value of personal interaction is still very high. I mean, after all, it was expensive and took a lot of time for all of you to fly here. And yet the fact that in between the meetings you're going to run into people you already knew, touch base with them, meet some new people, this physical experience still has elements that are really fantastic that we can't substitute with an online experience.

Now, online is getting pretty good. The difference is less than in the past. You know, now when my daughter has a new boyfriend, I usually see the person first because he's on Skype and then he'll say, you know, his parents will come onto the screen and so we meet the other parents on Skype and don't even get to shake their hand or anything.

You know, the technology stuff does get better and better. No one is predicting that face-to-face will go away, and you do give up something when you don't have that. But if you're watching your class go along and some kid's having a problem, the fact that you can connect to them with a Skype type video and talk through them, that's not that much worse than doing it face-to-face. If you can do it face-to-face, that's better. Certainly the lab where you have the hands-on experience and using the things, that's really good, but some of the online simulation labs also are quite good, and in some ways you can learn slightly different things with each of those tools.

We need to experiment with this. The thing that's scary is that the kids who are the least motivated may be ones where that personal face-to-face continues to be important. So, if we do crummy online things, the bottom 20 percent may fall even further behind. And so that's why we need to be very tough on ourselves in benchmarking were there any kids who this approach left out. So, I think we'll still have a lot of face-to-face, but we're going to push technology to its limit.

QUESTION:
Thank you so much for joining us here and sharing Seattle with us.

My question for you, Mr. Gates, was earlier this week Seth Godin published a manifesto on education, and sort of revisiting some of the things that Sir Ken Robinson had pushed out that education, the old paradigm was to train factory workers and communicate obedience. I wonder when you think about your work through the foundation how do you define the purpose of education?

BILL GATES:
Well, I wouldn't want an assignment where I had to do that in one page

The culture you create in the classroom where people are respectful to each other and they all know that they're engaged and trying to learn together, that is such an amazingly important thing. I spend a lot of time in public schools and see that a lot of those are not doing a great job. More than looking at the complexity of the material on the board, just the tenure of what's going on in the classroom, are the kids paying attention to each other, are they respectful to each other, is such a huge predictor of what's going to work well.

When these inner city schools, sometimes independents, parochials, charters, when they really succeed there's this amazing culture that has been built, and that's the magic thing. That's not just good because it lets people learn how to multiply. Generally learning how to live in that cooperative culture is one of the most important skills you need in college and in the workplace.

So, I'm a big believer in tests, and if you can't multiply there's no degree of creativity or independence that can overcome a failure to do that, but this hard to identify aspect of how you engage in a problem and work with other people, that's very hard for us to measure, and it plagues education because when we talk about changing things, if you don't have a gold standard of measurement, it's very hard, people will say, no, well, now we're not getting as much of that unmeasurable thing as we got before. But it's the kid participating in a respectful learning process with other students, I'd say that's kind of a gold standard of what you want out of education.

QUESTION:
Yes, Don at Blue School, New York City.

I think a lot of what you're talking about, Bill, has to do in terms of its success with helping faculty to understand the uses of technology and also share amongst themselves in their own schools some of the lighthouse projects that are working.

My question has to do with one of the original projects that you did at Lakeside with scheduling. I'm wondering how it is that scheduling might be helpful in having teachers experience their day in a different way, having them schedule in to connect with each other, and whether that's one of the roadblocks right now that we need to be thinking through in schools, because a lot of our teachers are going to say, I just don't have time to talk about that issue, I just don't have time to get together with colleagues. So, perhaps some thoughts from you about how technology can help teachers in their own schools in the school day connect with each other about the use of technology.

BILL GATES:
Well, you're absolutely right that often when you're teaching you're so engaged in your classes that the amount of time you have to step back and say, is there another teacher in the school -- I'll just stick to technology -- using technology in a way that I don't know about, is there a teacher in a nearby school who's doing it well, is there some new website that's either free or that I'd have to lobby to get the license fee paid that would help me do this teaching, you really have very little time to do it. And it's kind of amazing to me the teachers who actually do go out, this teachers paying teachers thing where people have created this stuff, or Udemy where teachers do the lectures and they've done such great stuff, or the lab stuff up there in Gooru where for any science topic there's some very well done stuff there. It's amazing that anybody finds time to do those things.

Whether or not we ought to more formally give, as we're -- you know, this next decade of cacophony is taking place, whether we ought to formally give teachers time to learn about these things, I don't know. I mean, there is some professional development time or money set aside, and at the very least a lot of that should be shifted to getting people exposure into new digital things, even the most radical kind of digital approaches that are out there, so they start to form opinions and they have exposure.

Within your own school actually scheduling time for teachers to sit down and talk about those things, whether you can fit that in or not, is that a summer type activity where you take the 20 most interested and have a week in the summer where they'll sit and talk about those things, how you bring in outsiders, a little bit this is the thing our new website is supposed to help facilitate a bit is that you'll be able to see the universe of things that might be relevant to your grade level and your class type, and we'll have some pretty good surveys, and we'll talk about where studies really are being precise about what's actually known and what's not known to separate it out from some of the hype.