NEW YORK CITY DEPARTMENT OF EDUCATION, OFFICE OF INNOVATION

Meet the DOE - Common Core

Introduction by Steven Hodas

Presentation by Courtney Allison

and Tracy Fray-Oliver

1   [START RECORDING]

2   MR. STEVEN HODAS: Thank you guys for

3   coming. I'm Steven Hodas, I run the - - school,

4   and we are an - - project that is the sponsor of

5   the challenge, which I guess most of you guys

6   know about and why you're here. And aside from

7   the challenge, we do other things, we hold other

8   events. And the idea is basically to help

9   people who want to build new stuff for us or for

10 anybody else, to help build up - - activity - -

11 want to use it. And so we had a panel last week

12 on educational meaning, on student marketplace,

13 - - distribution issues. This is the first in

14 the series of what we're calling Meet the DOE

15 fireside chats. Today we have some folks who

16 are supporting the common core, and - - looking

17 really closely - - teachers and kids. And in

18 future sessions, we'll have people from - - ,

19 we'll have people from the - - , the information

20 technology side of the DOE, both on the

21 enterprise side of things - - strategy, data

22 strategy, and also on the - - side of things, to

23 talk about - - what some of the issues - - .

24 Just to remind you, the challenge has a few more

25 weeks left. You should absolutely submit,

1 there's no reason not to. No reason not to.

2 At the very, very least, if you need the rules,

3 which are pretty broad, you can pretty much be

4 sure that your stuff will be seen by a bunch of

5 people at different - - all the way down to - -

6 . I guess, just a little bit about format.

7 Tracy and Courtney are going to talk a little

8 bit about how - - the world, and how to - - ,

9 and there will be a chance for you guys to ask

10 questions afterwards - - . But I think it would

11 be good for everybody to start going around the

12 room and people say who you are, and just if you

13 ever built curriculum, or if you're building

14 curriculum now, just so that everybody has a

15 sense of who's there for you. If you have a

16 company, you work for a company, say that, too -

17 - . You want to kick it off?

18   FEMALE VOICE 1: Sure, I work for the

19 company called the Department of Ed.

20   MS. MEGHAN: I work at the - - with Steven,

21 but at a different initiative, but certainly

22 within the office of - - . I'm Meghan, sorry.

23   MR. TROY: Troy from the New York City

24 Department of Ed, also - - .

25   MALE VOICE 1: - - consultant - - .

1   FEMALE VOICE 2: I'm - - I'm from - - . We

2   don't really do a great deal of - - .

3   MR. DAVID: My name is David - - . I'm the

4   co-founder of the - - we're a math - - unit, so

5   we're - - technology and - - .

6   MALE VOICE 2: My name is - - for

7   programming and - - classroom - - students with

8   literacy - - .

9   MR. MICHAEL: I'm Michael - - , basically we

10   connect classrooms in - - current events, and so

11   we're building - - .

12   MR. DIAZ: Hello, I'm - - Diaz, I'm co-

13   founder of - - .

14   MS. MICHELE: Michele Wilson with - - NYC.

15   MR. JACK: And I'm Jack - - we develop

16   online courses, something that - - .

17   MALE VOICE 3: I'm - - I work for a company

18   called - - , we do - - .

19   MR. JOHN: I'm John, and I work - - .

20   MALE VOICE 4: I'm - - , I work for a state

21   science school - - which is called - - .

22   FEMALE VOICE 3: I'm - - , I'm head of - -

23   at - - and I previously worked at a kindergarten

24   classroom as well.

25   MR. HIRSCHEL: Hi, my name is Hirschel - -

1   and we're a 3-year-old base - - students.

2   MR. JOE: My name is Joe - - I'm co-founder

3   and CEO of a tech startup called Civic games,

4   building a game-based personalized learning

5   platform for - - .

6   MS. KRISHNA: Hi, Krishna - - , I work for

7   an application, which is called - - , and - - .

8   FEMALE VOICE 4: I'm - - I'm the president

9   of the organization called - - . I grant - -

10   from the US Department of Ed to build a teacher

11   online collaboration system for teachers and

12   students to search - - instructional resources.

13   MS. COURTNEY ALLISON: Great, thanks.

14   Alright, so I'm Courtney Allison. I work for

15   the DOE, in what's called the Office of

16   Achievement Resources. There will be lots of

17   DOEEs, it's a language. If you're going to

18   enter into anything with the DOE, it's worth

19   learning some of, but you can stop and say "What

20   was that," or "What was that acronym," or "What

21   do you mean," or "Does that word mean anything,"

22   at any point in time, so please stop me. I lead

23   up a team called the Common Core lab.

24   Basically, it's a group of 10 out of 10, I have

25   about eight - - and we work closely with 35

1 schools with what we call an instructional

2 cabinet. That means there are five to seven

3 teachers and a principal, and we work on their

4 scaling structures through the school. And so

5 the handout that you have in front of me, on the

6 side with the pie charts, is just kind of an

7 overview of lab, so that you can see what

8 basically we do, and also so that you can get a

9 sense of the language that we use to talk about

10 it. So when I sent this out to Steven, he wrote

11 back and he's like, "You will have to define

12 normed understanding of characteristics of

13 quality of teacher and student work." And I

14 said, it's true. But basically, there are two

15 things that we're working on with teachers, and

16 that's hopefully improving the student work and

17 the classrooms in their own - - practice, so

18 curriculum design and teaching in their

19 classroom, and then also coming to an

20 understanding of what that means. So that

21 normed understanding is big, because--we were

22 just talking about the common core, people

23 aren't sure what good looks like anymore. I

24 mean, you have Appendix A in the back of the

25 literary standards, and you have some math

1   examples, but for the most part, it's new

2   territory. And so really, building a

3   professional learning community, in our case,

4   it's face to face with some beginning online

5   component, where we really develop a shared

6   understanding of what it looks like with the

7   common core, has been some key components of our

8   work this year. And we've used a few of the

9   frameworks, we've used some frameworks for

10   teaching and learning to do that, but it means

11   that I spent - - I spent about 20 percent of my

12   time in schools and classrooms, and then another

13   couple days a week either giving PD or planning

14   PD for teachers and working with teachers and

15   principals. And this was exciting to think

16   about coming to, because we talk all the time

17   about what teachers are getting from the common

18   core, how they are making sense of a whole new

19   world of open educational resources, and so

20   we'll talk a little bit more--my background was

21   as a middle school math teacher, particularly

22   sixth grade. So I have a particular affection

23   for the math standards, and a real interest in

24   unpacking the way in which they're constructed

25   and how that can help teachers make sense of the

1   content.

2   MS. TRACY FRAY-OLIVER: Okay, my name is

3   Tracy Fray-Oliver, and I work in the Office of

4   Academic Quality, specifically on a team that's

5   in charge of servicing and evaluating resources

6   that are aligned to the common core. And so our

7   work literally is digging into materials that

8   are available out there right now, to find out

9   whether or not they are aligned and whether they

10   are consistent with the shifts in instruction

11   that the common core is asking for. And part of

12   that work is managing a set of educators that

13   we've trained to become familiar with our tools

14   and protocols that support us in doing that type

15   of evaluation, but also, through the process,

16   has helped to develop their capacity and

17   understanding of the standards. Because part of

18   our process and protocols is really all about

19   just digging into the standards. And you have

20   to do close reasoning, you have to look at a

21   variety of different materials, as Courtney

22   said, try to make sense of what this looks like,

23   not only in materials, but also think about what

24   are the implications for practice. And so that

25   group of educators started off last year as a

1   set of 60, 30 in ELA, 30 in math. I

2   specifically held every session for the math - -

3   . And now this year, they've scaled up to 300,

4   and we've taken on a new group of fellows in

5   science and social studies, but have been able

6   to scale up the groups that we have in ELA and

7   mathematics. So in math, specifically, we have

8   about 100, and ELA, we have about 130. And so

9   we've really taken on the work last year of

10   defining what does good look like and what does

11   common core alignment look like. And then this

12   year, we've extended the work to saying, you

13   know, teachers are taking on this work, how can

14   we provide feedback to those teachers to let

15   them know how things are going. And more

16   recently, to go on larger work, kind of putting

17   it out there for vendors to say if you have

18   something that you think is common core aligned,

19   let us see it, we'll evaluate it, give you some

20   feedback, with no intention, I guess, of

21   actually identifying something, understanding

22   that the work was starting. But surfacing

23   things that were aligned and did promote the

24   shifts and being able to actually recommend core

25   curriculum this year for schools to use next

1   year in ELA and math, from K through 8. And

2   so, I guess we'll talk a little bit more about

3   the work, but spent a lot of time evaluating.

4   MALE VOICE: Can you just talk about--you

5   talk about the shift, what characterizes the

6   shift? From the raw sense, what's different

7   about common core, what is hard - - .

8   MS. FRAY-OLIVER: So, as I said, that's

9   dimension two of our rubric. And the first area

10 for us is really taking that - - standard and

11 looking at evidence of whether or not, whatever

12 the material, the activity, whatever experience

13 the student is having, whether it's being

14 assessed, actually elicits evidence of the

15 standard, what the standards are specifically.

16 But the next dimension for us is really thinking

17 about whether it promotes the instructional

18 shifts, which are focus, meaning that whatever

19 the students are engaged in, that it's focused

20 on high priority standards, every grade has

21 identified what kids should be working on the

22 majority of their time. And then the other

23 piece for us is whether there's coherence in the

24 materials, whether students are actually making

25 connections. And are those connections clear

1   for both the teacher and the student, right?

2   So that kids stop seeing concepts as discrete

3   topics, which, for a lot of us, is what

4   mathematics felt like in the past. But the

5   shifts that are really identified and called out

6   really ask for kids to be able to make those

7   connections and supports teachers in identifying

8   those connections. And the third shift is

9   rigor, which is composed of fluency, helping

10   kids to do things with speed and accuracy, and

11   then part of--the other part would be deep

12   understanding, which allows kids to actually

13   write about their understanding of the math, an

14   application which allows kids to apply the

15   mathematics without prompting, which is

16   something that has been very new for teachers

17   and we have a common core library that hopes to

18   serve as an example of what that can look like.

19   And so, the common core fellows spend a lot of

20   time helping to develop those tasks, but also

21   reviewing tasks to help give teachers insight

22   into what tasks and units can look like that

23   actually provide these opportunities.

24   MS. ALLISON: Well, so the fluency piece is

25   actually something that we sought early on with

1   resources, those are really the common thing

2   where we felt like, people were like, "Oh, yeah,

3   we got fluency, that means they do a lot of

4   problems all in a row." And then they'll

5   demonstrate fluency, and they'll get a sticker

6   or a badge or whatever it is. And so one of the

7   things that we've been pressing back and forth

8   with, with curriculum materials, which may be

9   applicable to those of you who are thinking

10   about math apps or math materials, is this idea

11   of what is fluency, and it's not just

12   memorization, and it's not just that they do it,

13   a lot of it, very quickly, but these ties into

14   conceptual understanding and application that

15   really differentiate fluency from what we kind

16   of talked about in the past.

17   MS. FRAY-OLIVER: Yeah, so I think it's that

18   balance that we're trying to get teachers to

19   see. Because initially, when they see the shift

20   of fluency, it's like, you know, for the math -

21   - , everyone was kind of like, yes, told you

22   they need to do things fast, and the validation

23   of actually timing them, and they have to do it

24   a bunch of times. But really getting them to

25   see that there needs to be a balance, and that

1   the conceptual really does influence a

2   student's ability to develop fluency. And I

3   would just say another big thing for us has been

4   getting teachers to also understand that when we

5   talk about alignment, that is not just to the

6   standards, the content standards, but also to

7   the math practices, the eight practices that

8   really speak about what student--their behavior

9   and the way they thing and their reasoning, what

10   does that look like and how do you know a

11   student's proficient in those practices? And to

12   be honest, I think it's part, as we looked at

13   resources and talked to teachers and see them

14   even trying out things, they struggle to think

15   about how do I know this thing that I've created

16   and put in front of my kids actually provided

17   the opportunity for them, let's say, to make

18   sense of something and persevere? How do I know

19   that they're persevering? Is it because they

20   didn't give up? Or, similarly, another practice

21   asks kids to critique, to construct a viable

22   argument and critique the reasoning of others.

23   I think for teachers, this whole new experience

24   of how not only do I provide that opportunity in

25   my classroom, but how do I elicit evidence to

1   know they're actually doing it? And if

2   they're not doing it, how do I support them in

3   learning how to do these things? So I think the

4   idea of math reasoning in the classroom and

5   discourse and planning and all these things have

6   been a new type of conversation for teachers.

7   MS. ALLISON: And we've been reviewing

8   materials, that's another place where we see

9   developers are either really missing the mark or

10   really hitting it, that the standards for

11   mathematical practice are not a checklist, and

12   that often there are, often there are places in

13   the work where of course maybe this could get to

14   perseverance, or it could get to critiquing the

15   reasoning of others, but actually there's focus

16   within this particular standard that has to do

17   with looking for and making use of structure,

18   and so that's where you're going to hit on this

19   problem, where a child is really going to look

20   at an expression, and it's about examining

21   structure. Although, maybe they'll go back to

22   some of the other standards in mathematical

23   practice through that, but that it can't be a

24   checklist, and so the materials that we've seen

25   where we see a lesson that has a couple of

 1   standards outlined, and then it says standards

 2   for mathematical practice, and they're all

 3   listed. And that pretty much right away gives

 4   us an idea, that the people who are constructing

 5   those materials don't really understand the

 6   standards for mathematical practice, nor have

 7   they really looked deeply in the standards. And

 8   I would just say in terms of need, this idea of

 9   this shift of having focus has been

10   particularly, I guess, daunting for teachers,

11   because the idea is with focus, it means you

12   have more time. But with time, means you need

13   more resources, or you need to understand, how

14   do you take a concept that in the past was

15   presented over the course of a week, and now,

16   you have eight weeks to teach a concept to them.

17   It has been something that has been very

18   challenging, in more of a oh, I need to find

19   more worksheets, or oh, I need to find more

20   problems, and how do you get them to understand

21   that this provides the opportunity to leverage

22   those practices and try different problems and

23   get kids to think and talk about math. And I

24   think for them, the idea of having a real world

25   problem and applying mathematics without

1   prompting is a foreign idea. So letting kids

2   actually having a problem, like what is a

3   problem versus a word problem, you know, they're

4   used to that little blurb, and they're just

5   like, if I use this property to find this

6   answer, but just given a real world situation

7   with no guidance around mathematics allows for

8   you to use all this time, but they don't have

9   any examples of that. And then how do you

10   facilitate that in the classroom with some of

11   the things they're struggling with?

12   MALE VOICE: When you say do mathematics

13   without prompting, do you mean literally

14   prompting? Like, prompting would be the teacher

15   says to the kid, okay, here's this problem about

16   collecting trash in the number of garbage

17   trucks, I want you to figure out the number of

18   garbage trucks, I mean, is that prompt - - ?

19   MS. FRAY-OLIVER: Not the prompt in the

20   sense that you tell them what you want them to

21   determine, it's when you tell them how to

22   determine it. So when you say, apply this type

23   of mathematics, use the distributive property to

24   rewrite this, or if you give them a really rich

25   problem with all these situations, and then you

1 say, "step one, create a graph that shows this

2 relationship, make sure in the x-axis, you have

3 this variable and that." The kid doesn't have

4 to demonstrate any understanding or bring to the

5 problem any--they're not - - they're following

6 the steps, your prompts. And so providing those

7 opportunities - - .

8   MS. ALLISON: But with the modeling

9 problems, those have been particularly sticky,

10 because often these real world problems aren't--

11 they don't bind you to the content standards in

12 the same way as a well-constructed word problem

13 does. And so helping teachers find places where

14 there's real modeling opportunities within the

15 world that can also address content standards

16 and knowing what content standards don't lend

17 well to those. And so maybe we aren't going to

18 try modeling problems around that. And that's

19 okay, too. And making--

20   FEMALE VOICE: There's a question over here,

21 too, sorry.

22   MALE VOICE: I'm sorry, I didn't want to--

23   MS. ALLISON: Go ahead, no go for it.

24   MALE VOICE: Is that okay?

25   MR. HODAS: Yeah, go ahead.

1   MALE VOICE: As you were talking about

2   just some of the more qualitative aspects of the

3   common core, the perseverance and those kinds of

4   things, I was wondering whether or not the

5   discussion with teachers is kind of - - idea of

6   grading, and how grading has changed, or does it

7   change and how do you get it to change? I'd

8   love to just hear how you guys think about

9   grading the contents of this alignment of the

10   common core?

11   MS. FRAY-OLIVER: So that has also been - -

12   a little bit as part of our evaluation when we

13   look at whatever the resource does around

14   assessment and student evidence, the quality of

15   it. And for us, since, you know, - - really

16   giving us an opportunity to start thinking about

17   rubrics and how to do, how to analyze student

18   work through the lens of the standards, which is

19   very different, right, so you can't just give a

20   check plus anymore, or really neat handwriting,

21   or you did really great today in class. Like,

22   your teacher comments need to also talk a little

23   bit about evidence of the content and the

24   standards, and I think what the common core

25   allows for us to start thinking about is how can

1 you provide feedback on student work to a

2 student in terms of the content? Or how can you

3 show a student's performance along a continuum

4 towards a standard, right? So if you know the

5 progression of what--how can you place the

6 student along that continuum, and say this is

7 where they are, so now I can make instructional

8 decisions.

9   MS. ALLISON: But also how can you not make

10 that damning. So we've been working a lot with

11 formative assessment being actually formative,

12 and fighting against the grade book reflex,

13 which is, okay, I know that this student is on

14 this continuum and so they have a 60. And so

15 then at the end of whatever the marking period

16 is, that 60 somehow gets averaged into their

17 score, even though they actually have met

18 standards. And the looking at student work has

19 helped to press that, and also an emphasis on

20 formative assessment, and what does it mean to

21 actually look at some information from a

22 student, whether it's an exit ticket or sitting

23 down and listening to their conversation, or

24 seeing a snippet of their work, and then saying,

25 this can't be graded. You cannot put this in

1   your grade book, what would it look like if

2   you couldn't put it in your grade book, what

3   would be your next instructional move be? And I

4   think it's a big culture shift, especially with

5   math teachers, because they typically often - -

6   quantitative.

7   MALE VOICE: So we create ed products and

8   content for the teachers, and a lot of it - -

9   but we also emphasize strongly on critical

10   thinking in order to - - challenges and - -

11   questions. Is there, are there any common core

12   standards that are simply aligned just - -

13   critical thinking and developing the skills that

14   aren't necessarily subject based?

15   MS. FRAY-OLIVER: So, for us, I mean,

16   obviously in the work that I do with evaluation,

17   the lines is always in alignment to the

18   standard. But what we find is that, and what we

19   really push is that you really can't have the

20   practices without content. So I can't assess a

21   student's ability to reason quantitatively and

22   abstractly unless I'm talking about some type of

23   content, right? You can't make--you can't

24   construct a viable argument unless you're

25   talking about math content. So we really

1   emphasize, try to emphasize the teachers, that

2   there should be a strong relationship between

3   the opportunities you provide around critical

4   thinking and reasoning, and the actual content

5   you're assessing. But I think Courtney's

6   earlier point, is the idea that sometimes, with

7   those modeling problems and that really - - it's

8   hard to do that really one-to-one match or

9   ensuring that you're checking everyone. But

10   we'll definitely say that even with questions

11   that will do with critical thinking, there'll

12   always be content around that.

13   MS. ALLISON: And possibly more - -

14   standard, that there are pieces in the letters

15   and standards that have to do with that kind of

16   thinking, but pressing that to not--never be

17   outside the context of some sort of content,

18   because that gets you away from, we spend the

19   first month of school setting up to do the work

20   of school, and that makes many of our hearts

21   beat fast and go, oh my gosh, how many days was

22   that where - - content. In the back?

23   MALE VOICE: - - question - - first grade

24   math - - apart from - - for establishing - -

25   mathematical thinking - - . - - helpful later,

1   what's your position in those - - ?

2   MS. FRAY-OLIVER: So cases in which there's

3   relevant content, things that you want to teach

4   a kindergarten student but may not be in their

5   standards. Well, I think that really takes us

6   back to focus, and it's really part of the

7   shifts that we're looking for, particularly in

8   materials that we're putting from the students,

9   that to support teachers in making the shift, to

10   spending the time in the right places, and

11   allowing for the major work of the grade to be

12   covered, we really are against the idea of

13   bringing in other concepts, because we find that

14   it's hard for teachers to make those decisions.

15   So if presented with the option to spend six

16   weeks on ratios and proportional reasoning, but

17   then I see there's a bunch of work around

18   quadratics, I may want to bring--I'm not going

19   to spend six weeks because I can get to

20   quadratics. We want to make sure that what's in

21   front of them is really focused and limited to

22   help support that work.

23   MS. ALLISON: Also I want to tease out on

24   what's the strategy and what goes toward the

25   standards. So if you're talking about students

1 learning about - - is that getting them toward

2 a better understanding of evens and odds and

3 other things they're going to--then that's a

4 strategy, it's not necessarily a different

5 content standard. So, I mean, we find a lot,

6 that there's a lot of arguments sometimes with

7 teachers who have attachment to certain

8 problems, and they'll look at curriculum

9 materials and they'll say, "Oh, but I would

10 definitely do the dice game for that." And so I

11 wouldn't use these materials. And you're

12 thinking like, let's take a moment and say okay,

13 what does this problem do? Does it achieve the

14 same thing that your dice game does? Okay, then

15 is that a logical switch? Does that mean you

16 just discount this curriculum or is it actually

17 just a personal preference? You had a question?

18   MALE VOICE: So I think you were starting to

19 touch on what my question is about. I look at

20 both the sort of market demand and what's

21 currently on offer, still being very - - divided

22 between curriculum as one set of tools and

23 resources, instructional tools - - tools and

24 resources, and the classroom management,

25 behavioral management, information management

1 tools among other set of resources. I'm

2 wondering how you guys are thinking about the

3 ways in which new technologies can integrate

4 those things and break down those barriers and

5 what you would like to see in tools that hope to

6 bring integration to - - tools?

7   MS. ALLISON: Classroom fixing tools?

8   MALE VOICE: Well, I mean, even breaking

9 down that distinction, like a student facing - -

10 teacher facing - - pieces of a connected

11 technology or - - .

12   MS. FRAY-OLIVER: So we think a lot about

13 that, in terms of evaluation, just around

14 quality and utility for teacher use. That part

15 of it is at whatever resource the teachers have

16 that is comprehensive, right. So maybe all the

17 contents there. But does it also support in

18 being able to teach the materials and what does

19 it mean to teach? You know, there's all the

20 different lenses in capturing the data, at the

21 same time you want to make sure you're engaging

22 - - kids are - - from the beginning and actually

23 doing the work, and how do you actually give an

24 exit ticket and make sure you get it back at the

25 end. And so we've thought a lot about how can a

1   resource support that, and what are ways in

2   which we can - - and to be honest, it has been

3   very segmented. So a teacher planner is always

4   a separate book, and then the actual

5   assessments, and then you can go online and you

6   can track your data, and for us, it's like,

7   well, can the kids, can the--or the teacher has

8   to manually input the data separately, are they

9   going to do it. And so these are things that -

10   - pushing to see in resources for teachers that,

11   knowing that it's hard for our teachers to be

12   online during the day in schools, because it's

13   not always as reliable, and you know, depending

14   on them to go home when they're tired - - that

15   we need it to be something that's very user

16   friendly, but also very accessible. And I'm not

17   going to five different places, but more

18   importantly, that I see how they're all

19   connected, and so I would say if anything, the

20   resource would need to be relevant and not

21   require them to have maybe multiple apps, but

22   that within one tool, I can - - different

23   section and get to the place I need to be, and

24   understand why we're all connected.

25   MS. ALLISON: I'd also say that just having

1   just talked to one another, one place that the

2   current large publishers are still living in a

3   land where everything is in silos, and that

4   that's just so incredibly difficult for

5   educators for a variety of reasons. And so,

6   even if things are separate, that they're able

7   to talk to one another, that you're always able

8   to download your data into Excel, that you're

9   able to upload things into a variety of formats,

10 those are kind of the user givens that exist in

11 the business world, but sometimes education

12 feels that it's really lagging behind. So a

13 teacher can enter their data in an excel

14 spreadsheet if they're not online at school, but

15 they know confidently that that's going to live

16 within whatever system that they're using. And

17 then the open educational resources, which are

18 really coming when you talk about what we have

19 on the common core library, what we haven't

20 engaged and why are all of these other places

21 that you can gather content from, really making

22 sure that search functionality is broad, and

23 taking advantage of those tagging standards so

24 that teachers know that when they're performing

25 a search, even if it's from within a system,

1   that it's pulling from multiple places - -

2   helpful.

3   MALE VOICE: - - that the common core - -

4   inherently supports - - type of stuff and

5   teachers going out and getting things, - -

6   direction of more diversity of materials or more

7   sources being brought into a single classroom?

8   MS. ALLISON: I think so, and then it

9   increases the complexity.

10   MALE VOICE: Right.

11   MS. ALLISON: And so already we're seeing

12   teachers who, if they don't have a math

13   curriculum, are going, "I looked at Georgia," "I

14   looked at Alaska," "Oh, I'm using Tennessee,"

15   and you're thinking, "Oh, gosh, that's a lot."

16   MS. FRAY-OLIVER: And the work of--for us to

17   be on top of it, so if we are being--"So did you

18   see the Georgia thing?" I'm like, "Oh, yes, we

19   did see"--you have to make sure to be on top of

20   all of the - - what's exciting is the

21   opportunities for collaboration and sharing best

22   practices, and being able to come to one place.

23   I mean, if districts are collaborating

24   potentially, what we're seeing right now is

25   everyone has their own website, right, but

1   ultimately, they may link to someone else,

2   like that would be fancy, if they link to

3   someone else. But there isn't that space where

4   I could go and pull a resource from anywhere,

5   but then also ensure that it's high quality, and

6   that's obviously something we think about that

7   is one thing if there's a random, you know, Joe

8   Schmoe tagging things, but how do--and they say

9   it's aligned, and so I'm trusting that, and

10   assuming that I have very limited time, how do

11   you also ensure that the things you're getting

12   are quality, and not in this way that it's

13   extremely overwhelming, because of someone who

14   handles supporting reviewers takes a lot of time

15   to review. So being able to set up a structure

16   that makes the ratings for an item clear, but if

17   something isn't rated officially, how do you

18   still support a - - ?

19   MS. ALLISON: You had a question.

20   MALE VOICE: Is there any consideration

21   around - - working on the - - common core sets -

22   - across - - there's different subjects, but if

23   you are, say, writing about an article about the

24   constitution, that's informational text, so that

25   - - about the constitution, and maybe they're

1 | using--they're writing an argument expressing

2 | - - and maybe they're using - - to show - -

3 | sections across multiple subjects, or do you

4 | just go, this is a social studies resource, or

5 | this is, you know, a - - resource or this is a

6 | mathematics resource. How is that - - ?

7 | MS. ALLISON: I'd say it's in its early

8 | stages, it's still pretty siloed. I mean, even

9 | our most--even schools that are doing some of

10 | the most advanced work are only now beginning to

11 | do that kind of cross-curricular planning. And

12 | so assessing on those different levels, if it

13 | includes a graph, does it count as math and

14 | interpreting data? Or is that part of the

15 | literacy standards? I don't think there--there

16 | hasn't been as much work on that that I've seen.

17 | MS. FRAY-OLIVER: Yeah, and I think that the

18 | science and social studies are just making sense

19 | of how they keep their content alive in the

20 | literacy standards, and finding that blending.

21 | So I think--and seeing a few opportunities for

22 | math and science to collaborate a little more,

23 | but I would say across all subjects or more of

24 | an interdisciplinary approach hasn't been at the

25 | forefront of the work, because I think so much

1   of the time has been making sense of it within

2   your own grade, I mean your own subject. Yes?

3   MALE VOICE: Who - - which was that there's

4   all this - - out there. And it's great for - -

5   use it, but to me, and what I found is that it's

6   almost - - where you - - which is not - - that

7   over the years has been created - - here's an

8   expression Y equals MX plus B is a complete

9   vacuum. And you're going to get a - - on our

10   website. But if you need to bring it all

11   together - - question, have you seen tension

12   there, where - - stuff that's really hard to

13   make sense of it, and how do you actually

14   convert that into - - ?

15   MS. ALLISON: Which I say is--we're still

16   grappling with how do you help teachers get to

17   know the standards really well, because if you

18   know standards really well, and then you can

19   apply that, because you'll know whether or not

20   it's aligned. So right now, to a certain

21   extent, the knowledge of the actual standards in

22   themselves is in its infancy, and then so that's

23   why they're more willing to say that - - say

24   it's aligned, it says 7 - - . But if you

25   actually really have a depth of knowledge of the

1 standards, then you're going to be able to do

2 that much more broadly. I mean, what we haven't

3 seen is applications or software or much of

4 anything as of yet that isn't face to face tools

5 that helps teachers to make sense of the

6 resources in a context of the standards

7 themselves.

8   MS. FRAY-OLIVER: And I think that teachers

9 had that comfort with the standards, they'd be

10 better able to make decisions around a resource

11 that may be high quality in another area. So

12 for the work that we do, like I said, it's

13 across different dimensions, and there may be

14 something that's great in terms of how useful it

15 is, or maybe how engaging it is, or how it

16 supports a set of diverse learners, but it's not

17 completely aligned to the standards, and so

18 there's that tension. So does that means we

19 don't want any teacher to see this ever? Well,

20 no, a teacher who's familiar with the standards

21 and could tweak this and take on the work for

22 where it's short, where it's not really meeting

23 the bar, it'd be great for that teacher to have

24 it. I think that part of the struggle is you

25 can't account for whose hands it would fall

1 into, but I guess in my dream world,

2 originally it was this idea that there was this

3 - - space, that there was some type of

4 indication across maybe five badges or signals

5 that you can tell that something maybe fell

6 short under alignment, but it got a really high

7 rating for meeting diversity needs or usability

8 or something else. But that I'd be able, as an

9 informed teacher, to say, "Oh, it's not totally

10 aligned, but I must still look at it, and I know

11 I'm going to have to go back to my standards and

12 make it better." I think that requires, though,

13 an understanding of the standards that, because

14 of the stage we're in, teachers are - - .

15   MALE VOICE: - - there is two stages - - one

16 is for teachers that - - understanding of - -

17 standards - - . So that's one challenge. But

18 let's say, even after you have the understanding

19 of standards, you still have to - - all your

20 resources together, so that - - . So it seems

21 like that's the second stage following - - .

22   MALE VOICE 2: I thought I'd - - . I know

23 that within math, at least it's divided into

24 these sort of broad domains - - functions and

25 probability. But at least from what I remember,

1   you know, - - math in New York, it was divided

2   into subject, sequential math subjects - - . So

3   my question is whose responsibility is it to

4   determine which bits and pieces to begin during

5   which years? And would you say that it's more

6   useful for people like publishers or for people

7   - - content to structure their content according

8   to the domains defined by the common core

9   standards or - - ?

10   MS. FRAY-OLIVER: So for us, it's part of

11   that coherence. So we talked a lot about having

12   the content, you know, connect with both - - so

13   we don't want to see materials just focused only

14   on one domain and not going in contact from

15   across domains. But part of the documents that

16   are highlighted on the back of the sheet

17   provides some resources around the standards

18   that we used around the major supporting and

19   additional work of the grade, which I think is a

20   whole new idea for teachers to really say that

21   the major work of the grade, and which we should

22   be spending 70 percent of your time on are these

23   big topics, right? But then there are these

24   supporting topics that you should spend another

25   part of your work on, and then there's this

1 additional topic that you should spend a small

2 amount of your time. And the idea - - standard

3 supporting, that means to support something

4 major, and so we have these opportunities to

5 bring concepts together, maybe across domains

6 across the year. And I think that's been one

7 thing for teachers to understand, that how do I

8 not teach these things in an isolated way? How

9 do I not just teach all the major work?

10 Because--but also think about how do I bring in

11 support in a meaningful way, and when are

12 opportunities that some of these additional

13 topics may be relevant, and so now I'm going to

14 teach it now? And I think part of our struggle

15 is that these all exist as separate documents.

16 So I have my standards, that's one book, so I'm

17 flipping over there, or maybe it's one app,

18 there's only one common core standard app, and -

19 - made it, but it's like really hard to

20 navigate, because it doesn't have a lot of

21 immediate things in math of the standards that

22 help. So like, the overview for a grade gives

23 us a sense of what math looks like in this

24 grade. But that only lets you hit on individual

25 standards so it promotes that work. So there's

1   that one resource, but then at the same time,

2   I would love to know, well, is this standard

3   major work? Am I supposed to be spending time

4   here? Well, I have to go through another

5   document for that. And then when I'm reading a

6   standard, and I'm like, "But wait, where does

7   functions come from? When did kids first even

8   start thinking about this?" And I have to go

9   through the learning progressions argument to

10   see how to trace throughout the years. So

11   there's all these documents that exist in

12   separate places that never give a teacher an

13   opportunity to kind of just at one place make

14   sense even one experience, just sit there and

15   tap away - - all the math.

16   MS. ALLISON: So maybe it's worth just

17   briefly--I don't know how many of you are

18   familiar with any of these things. This is not

19   an exhaustive list. But the first one comes

20   from a website that's authored by one of the

21   standards authors, Bill - - out of the

22   University of Arizona, and it talks a lot about

23   the learning progressions and the progressions

24   and the mathematics standards, and so this is

25   one example that is a visual that he uses around

1   the major floes of - - reading to algebra.

2   And since so many people are interested in

3   remedial work, in particular New York City,

4   where we have the sixth grade challenge, of kids

5   that arrive to middle school not ready, or the

6   high school challenge, of kids that arrive to

7   high school not ready, understanding what skills

8   or what conceptual understandings might be

9   missing. This has been helpful--this has been

10   very helpful for teachers to look back and make

11   connections across the grades. The illustrated

12   mathematics website is actually--it's--this is a

13   really interesting project, because they have

14   single math problems that illustrate math

15   standards. It's limited in terms of its

16   usability, because it's very pure. It's like

17   this problem exemplifies this exact standard,

18   which in some ways can drive against the kind of

19   coherence you want, but it is helpful to

20   understand the language of the standards

21   mathematically. And so, they also map the

22   different strands and how the domains go through

23   and you can see that probability and statistics

24   doesn't happen until middle school. This

25   particular diagram does not identify the major

1 work of the grade in the same way. The park

2 site that is listed here, and we reference--

3 because we're part of the park consortium, and

4 the testing eventually will be driven by that,

5 that's another reason why I would emphasize

6 going with the standards in the way the

7 standards are organized as opposed to some other

8 organizing structure in terms of viability for

9 use at least in New York City or any park

10 states. But the wiring diagram I didn't include

11 here, if you haven't seen it, you'd understand

12 why, it's like this long. But it does track all

13 the individual standards and how they connect to

14 one another, and it's kind of the master

15 architecture underneath the math standards, and

16 so if you're looking at building anything that's

17 the least bit adaptive, that also would be

18 useful to look at, and it's accompanied by a

19 bunch of other technical specifications that's -

20 - standard authors have used. And it's helpful

21 for professional developers, and it's helpful

22 for developers in terms of computers. It's not

23 necessarily a teacher - - document, so it's not

24 something that I would show a teacher who's

25 having trouble understanding how the standards

1   are built. But it is something when we're

2   trying to look at pathways of learning as

3   professional developers, we will go back to it

4   and take a look. So, but not on here is the

5   common core library, which you can get to off at

6   the DOE homepage. And if you haven't poked

7   around the common core library, then I

8   definitely recommend looking at the resources

9   that are there and the way that the Department's

10   talking about the standards and - - standards.

11   MALE VOICE: - - teacher, how would - -

12   assessed whether or not any of the standards - -

13   ?

14   MS. FRAY-OLIVER: So we do alignment in the

15   same way, I know for ELA - - because what's the

16   official content or topic or subject you're

17   supposed to teach? That's not defined. But it

18   does a great job of doing, showing the staircase

19   for the skills as well as this idea of text

20   complexity, it has been a real struggle for our

21   schools to get behind and handling the reading

22   levels that our kids come in, but also at the

23   same time meeting the expected text complexity

24   for a specific rate. I would say for us we

25   still do very close alignment. We look--we will

1   read a prompt. We'll look at what students

2   are asked to do, and we'll look specifically to

3   the standards to see where the kids are at - -

4   construct an argument, or are they actually

5   being asked to give an opinion when they are in

6   seventh grade. They should be thinking about

7   making argument and when is counterargument

8   coming in? So the standards still provide for

9   us in ELA opportunities to hold them accountable

10 to specific things that we hope to see them

11 doing whenever they engage in any type of

12 writing or reading prompt, knowing that the

13 actual topic or subject may be different across

14 schools, because there's no set subject or

15 content.

16   MS. ALLISON: And is your question how's the

17 teacher assessed on whether or not? I mean, so

18 without pretending to be a teacher evaluation

19 expert, which I am not--what? No. Without

20 getting into - - and all of that business, I

21 mean, so there are multiple measures that are

22 currently in the works, one of those is

23 standardized tests, and so how your students do

24 in the standardized test is one way that

25 teachers are evaluated. Another is, you know,

1 they're looking at multiple measures in terms

2 of looking at student work in a variety of ways,

3 as another measure of that. And then I would

4 say that principal observations and the tools

5 around those things are evolving both with New

6 York City, with the - - framework, but then also

7 some of the other tools that are evolving around

8 specific content area - - and things that you

9 can expect to see in classroom, because there

10 are speaking and listening standards, and other

11 market and performance based standards that

12 you're not going to see in testing and work in

13 front of you. And so, multiple ways, but

14 generally all based in some sort of student

15 output I would say. Meghan?

16   MS. MEGHAN: So, as we, as a city, and as a

17 nation begin to embrace the common core, which I

18 think is the best thing to happen in education

19 in a long time, there's also this conversation

20 going on nationally about online learning,

21 anytime anywhere learning. So for the

22 curriculum developers in the room and for those

23 otherwise, what do you guys think about, if you

24 think about--Courtney, you were saying that we

25 had this problem of kids entering sixth grade

1   not always math ready, and sometimes other

2   content areas, but math particularly as well as

3   high school. So teachers wrestle with this

4   problem of having, you know, 30 kids in the

5   class. Unfortunately - - more often than that.

6   We'll call it 30 base 10 - - . So when those

7   kids--we know they're not all learning in the

8   same pace, we know that they all don't come to

9   class with the same sort of preconditions for

10 learning, so as we think about developing

11 content in a blended space or an online space,

12 what are your opinions and what are you guys--

13 have you been starting the conversation about

14 having kids move at their own pace, knowing that

15 - - needs to be really at the forefront of that,

16 and that's what people misstep the most, right?

17 Learning can completely take place in an online

18 space, and you know that - - teacher - - . So

19 how do you make sense of that sort of national

20 conversation around anytime learning, in the

21 face of trying to help a nation of educators - -

22 much more deeply about what kids need to learn

23 and why?

24   MS. ALLISON: I mean, I've seen so little

25 good online pedagogy for teachers to use in

1 classrooms, that is often is oh, if I'm doing

2 remedial work, those kids can go to the back and

3 get on computers. And then it actually limits

4 the amount of conversation that those kids have

5 with a trained professional educator who has

6 spent years learning content. Or, those kids

7 are really advanced, and so they're going and

8 doing something online, and they're watching a

9 combination of videos and they're clicking

10 through something and maybe they're asking some

11 questions. The few places that I've seen some

12 interesting work is where collaborative tools

13 are actually used between students and between

14 students and teachers, so even something as

15 simple as a projected Google doc, where students

16 have a combination of out loud answers and work

17 that they're showing in a doc in real time so

18 that you get kids that are willing to answer out

19 loud, and you get kids perhaps who are more

20 comfortable sharing their thoughts in other

21 ways. Or ways in which kids are collaborating

22 to solve different components of a problem, with

23 the place that they come to share that

24 information is online. But there's that whole

25 piece about what does it mean to do blended

1   learning in a classroom with kids that isn't

2   go watch a video and answer a bunch of questions

3   in a glorified testing situation. And then how

4   do we use that information formatively to re-

5   engage kids in their learning?

6   MS. FRAY-OLIVER: And I guess just to add to

7   that point, like the idea, the standards really

8   push for supporting students who need

9   remediation to engage in the grade level

10   content, and that teachers have to find this way

11   of being able to master teaching grade level

12   content, in a way that supports students who may

13   be struggling. Which is clearly something

14   that's challenging for teachers, but that you

15   don't spend half of ninth grade teaching eighth

16   grade, or going, oh, my kids can't multiply. So

17   you spend literally weeks teaching them, that

18   compromises the focus, right? But part of what

19   they need is to understand, well, if I am going

20   to teach this topic that requires certain prior

21   knowledge, what are ways that I can infuse the

22   prior knowledge, make sure I'm supporting them

23   with it, but at the same time pushing them

24   along? And that's one need that we definitely

25   have seen across the way.

1   FEMALE VOICE: Just building on that. My

2   understanding is that brain research shows that

3   kids retain more learning if they can connect

4   with their learning as some - - in the past. So

5   in terms of, I guess, if you agree with that,

6   what is the demand for multi--bringing more

7   multi-modal resources into the classroom in

8   terms of - - the contacts for a particular look

9   at coherence - - real world problems, you'll

10   think there'll be more of a demand for videos

11   that provide a contact - - and then going into

12   the collaboration. To what extent are we going

13   to be harvesting and talking about real world

14   problems - - and bringing it into the classroom,

15   just to provide context, not as the main, not

16   from an online kind of learning environment, but

17   to provide ways for students to better relate to

18   the material?

19   MS. FRAY-OLIVER: I definitely, and we've

20   seen a little bit of some resources where - -

21   are a little more, I guess, more independence

22   for the student as they're engaging in a problem

23   to, you know, click and explore and get some

24   math background that may not necessarily be at

25   the grade level. I definitely think we haven't

1   seen it in a way that it's been-- - - that

2   doesn't compromise rigor in the classroom, or

3   doesn't create that situation where the

4   student's left out of loop, or left to navigate

5   on their own. And then there's really no data

6   or information on whether or not they've learned

7   anything differently. So I would definitely say

8   for us that we could--I could definitely see it

9   happening in a way that's successful, but I

10   think the focus would have to be kept in mind.

11   I think so, balancing coherence and focus is

12   something that's important.

13   MS. ALLISON: And acknowledging that the

14   infrastructure in a lot of classrooms may or may

15   not consistently support that. So having like a

16   video that's exciting, that sets the context for

17   a problem may be possible in some places, but

18   it's just as likely, particularly if it's a

19   large file and it's streaming, that it won't

20   work, that - - technology lies in the classroom,

21   sometimes for the students who need it the most.

22   And so like a reliance on that is a double edged

23   sword, I think. And we're seeing some more of

24   it.

25   MALE VOICE: The work that you guys are doing

1 - - a tremendously - - attempt - - both in

2 terms of gathering and then evaluating, and

3 training for practitioners, and ultimately - - .

4 Do you see like a - - there was a - - something

5 that would really - - less rigor intensive - -

6 or teachers - - turn on their work, or making it

7 happen - - . Where is that - - and say, if you

8 could move that a little bit to get lots and

9 lots of - - ?

10   MS. ALLISON: I mean...

11   MS. FRAY-OLIVER: So, having evaluated tons

12 of resources and having had them, developed

13 them, and then putting up exemplars, by - - our

14 website has, you know, a very impressive amount

15 of page views and visitors, not only from the

16 DOE, not only from New York, not only from the

17 United States, it's really exciting to know

18 that. But sometimes I wonder if there was more

19 of a--maybe a larger venue, or a different type

20 of venue where people could share, not only the

21 materials we produced, but our best practices,

22 our thinking. Some of the conversations, or

23 just some of the--I don't think that there's a

24 structure that allows for what's being done with

25 these 300 fellows, or even in a teacher team

1   somewhere. I'm sure there are great things

2   happening across all states, and there just

3   isn't that place where you can see the thinking

4   or best practices or work of other districts.

5   MS. ALLISON: - - not very playful. You

6   know on Instagram, where if you take a picture

7   on Instagram, you can see it on a map, and - -

8   the other people who have taken something in the

9   geo-located thing also that picture pops up, and

10   you're able to see everyone who took a picture

11   in front of the Empire State Building on a

12   certain day. And there are all these different

13   education resources, but nobody who is

14   connecting the dots between them. And so you

15   don't ever get to see kind of a picture of these

16   teachers doing work here, as well as resources

17   that might exist on a common core library, as

18   well as some student portfolio stuff that's up

19   somewhere in any way that's playful and

20   engaging, and makes you want to participate in

21   what is a national conversation. It just

22   continues to be kind of dry and unsexy.

23   MALE VOICE: This may be more of a technical

24   question, but those of us who want to get close

25   to - - are there any DOE-endorsed APIs that - -

1   using to - - or do you want to stay a - - ?

2   MS. ALLISON: There are APIs. You'll get

3   that in the next session. There's all sorts of

4   stuff.

5   MALE VOICE: I'm not sure specifically

6   around common core content. I've heard academic

7   benchmarks - - I don't know.

8   MS. ALLISON: The - - tagging standards, and

9   there's a bunch of stuff that I would say yes.

10   The DOE is moving to a place where it would

11   prefer not to have individual conversations with

12   each vendor in order to have individual

13   customized solutions for integration, for sure,

14   for sure.

15   MALE VOICE: Just, on that last conversation

16   you were having - - resources where - - reviews,

17   that stuff - - . And you guys can ask for it,

18   and so - - . But the question is, I'm really

19   curious to hear about what your vision for what

20   the school looks like in 5 to 10 years, and what

21   - - want to see the restructuring of the school

22   and the classrooms. Are we going to have a lot

23   of schools with open auditorium style - - what

24   are the schools going to look like? So when

25   we're developing resources, we can be thinking

1   ahead to a new kind of school, a school that -

2   - very well.

3   FEMALE VOICE: - - I mean I think - - this

4   notion of, you know, - - back to our own

5   experiences - - regards to - - myself or - -

6   others. School's generally - - generally 10

7   months a year, someone else generally decides

8   what courses a kid takes when. Someone else can

9   decide when and what a kid eats for lunch, what

10   she's eating every day. The adults are making

11   decisions about kids they never met before, and

12   that's just broken. It's just broken. And so

13   the school of the future may or may not control

14   - - but I think it's much more about a school

15   that's centered around what each of the

16   individual kids need, needs both as a - - . And

17   so I think that from a place with - - school of

18   the future looks like, I hope they don't all

19   look the same, that's for sure. I mean, I

20   certainly hope that schools have more lifelong

21   teachers first of all, who are interested in

22   that class as a true career - - you just don't

23   see - - districts around. I mean, talk about

24   laborious - - think about between Courtney's

25   labs and all the fellows, those kinds of

1   conversations. If there's about 600 teachers

2   penetrating that conversation to a larger

3   system, we're going to see data that says not

4   only those 600 teachers - - probably 6,000

5   teachers, if not 16,000 teachers - - longer if

6   they're able to constantly perform their craft.

7   So I think, and hope, that we're going to be

8   seeing teachers who know kids better and know

9   what they need better, and they have the tools

10   to think differently about what those kids need.

11   I hope that we don't silo the curriculum much

12   longer, I hope that we don't have math class and

13   science class and English class. I think we

14   should have school. And it doesn't have to look

15   the same every day. I would like to see in the

16   school one scenario - - . It would be nice to

17   see schools from - - a lot more frequently, so

18   that what school looks like in September for

19   kids in terms of the schedule or in terms of the

20   curriculum isn't what at all it looks like in

21   November. We need to build schools that are

22   much more malleable and what's more quickly

23   responsive to what's going on in those schools.

24   We also need schools that are more cost

25   effective. So the amount of money that we spend

1   around schools in New York City is staggering.

2   We get money per child, but we spend - - we

3   spend money on things that aren't sustainable

4   for the long term. So we need to build schools

5   that are more sustainable, but in terms of the

6   educational quality that our students get, but

7   also we need to be more efficient about how we

8   spend funds, so that we are giving kids the best

9   education that - - . So - - for all kids.

10   There is going to be a space for online - - I

11   mean, I agree with what Courtney said

12   completely. We need to have--the world doesn't-

13   -we live - - all these things - - . I hadn't

14   been to my office in three days, but I've done

15   my job for three days, and I think that school's

16   going to start to look like that for kids.

17   We're going to have - - that we know are school

18   buildings. We're going to have schools that are

19   year round, schools - - at night or summer, we

20   just need to be much more--education needs to be

21   much more of a - - to what's going on in culture

22   and society, and I think that New York City is

23   getting there. We're building some of those

24   schools now, but we're still a long way to go.

25   I mean, I think it's interesting what we--this

1   is sort of like - - the future of education,

2   and - - people who are committing their careers

3   and their business to providing better solutions

4   for kids that are sexy, and we like to use the

5   words - - . And I think that our teachers and

6   our school leaders feel that as well. I think

7   the harder part is the policy makers, and the

8   sort of very stagnant system that don't like to

9   change. They built--things have been built for

10 a really long time, and it's sort of the--

11 everything that comes into a school is actually

12 our hardest place to sort of entice to change.

13   MS. ALLISON: But from an application

14 standpoint, that's--the analytics have got to be

15 solid, robust, and available. It cannot be that

16 we have to beg developers for analytics that we

17 sort six weeks til Sunday and that we have to

18 pay for each individual report. And it can't be

19 that - - is like nebulous. I've got to be able

20 to tell - - somebody is logged in, but they're

21 actually interacting, how they're interacting,

22 and what ways they're interacting. And I've got

23 to be able to qualitatively analyze that or have

24 someone qualitatively analyze that. I've got to

25 be able to tell some real stuff, some real data

1   from the interactions that kids and adults are

2   having online to be able to push the policy

3   makers to give kids credit for courses, but to

4   also give teachers credit. Right now, we have a

5   system where teachers are in procession by

6   clocking in at their school site. So many of

7   you work in offices where you do your work, and

8   you don't clock in. Business has evolved, and

9   how is it that we're still teaching--we're still

10 treating teachers, not as professionals who can

11 do that, and part of that is an analytics

12 question, and that I'm not able to prove that my

13 teachers are interacting in an online space

14 robustly so that I can argue that I can pay them

15 for those hours that they're working after they

16 put their kids to bed, or do whatever they do

17 after their regular jobs. So that would be,

18 from a developer's standpoint, like, please,

19 lots of analytics.

20   FEMALE VOICE: I have two questions. The

21 first is just user experience. So yes,we're

22 moving common core, yes, we want teachers to

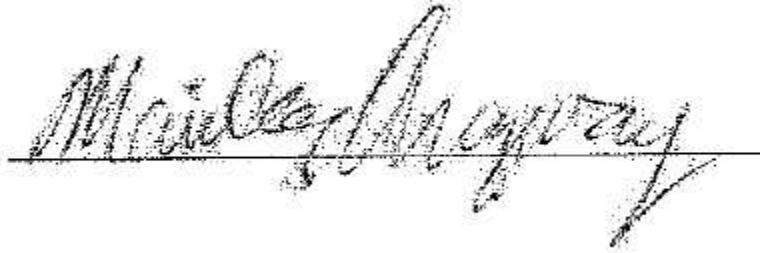23 understand standards and apply that their

24 selections.

25   [END RECORDING]

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2   C E R T I F I C A T E

3   The prior proceedings were transcribed from

4   audio files and have been transcribed to the

5   best of my ability.

6

7   Signature

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10   Date___April 1, 2013_____

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