

## Excerpts From Testimony

**Testimony of Dr. Linda Darling-Hammond, Charles E. Ducommun professor at Stanford University and Executive Director of National Commission on Teaching & America's Future, December 14, 1999**

BY MR. REBELL:

Q Now, Dr. Darling-Hammond, would you, again, begin your answer on telling us what skills you believe that students need to be able to function productively as civic participants in regard to voting.

A Let me preface this by saying that the Council on Curriculum and Assessment, as part of its work and the work of the subcommittee, spent a fair amount of its attention on the question of what skills do students need for citizenship, including voting, serving as a member of a jury, and other citizenship activities. And the committee and the council concluded that that included skills in English language arts that would allow the reading of the kinds of texts that students would encounter or that citizens would encounter in the course of enacting their duties as citizens. It would include skill -- knowledge about the functioning of the system of government that we have in this country, and in the state, and in the jurisdictions in which students live. It would involve dispositions, the development of an understanding of the importance of voting and participating, the viability to sort out different opinions and analyze and reason about the evidence presented for different kinds of points of view or policy ideas that are put forward by candidates in the voting process. And it would include sort of the analytic ability or inference-drawing ability to work from various kinds of data or evidence about issues to make judgments and decisions in the voting booth and as a citizen.

Q All right. Well, let me just take a few examples from the learning standards, and I'd like to ask you some specific questions about them. The first one, from the English language arts learning standards, on page 12, is the Standard 3, which is entitled, "Language for critical analysis and evaluation" --

THE COURT: What is that exhibit number?

MR. RUSSELL: The exhibit itself, your Honor, is 318.

Q We are looking here -- this is what's called the commencement level, which I believe is the graduation level, the 12th grade level. So, among the skills that students should acquire under the learning standards are the ability to listen and read -- listening and reading to analyze -- I'm sorry -- listening and reading to analyze and evaluate experiences, ideas, information and issues requires using evaluative criteria from a variety of perspectives and recognizing the difference in evaluation based on different sets of criteria. And if they have these skills, students should be able to analyze, interpret and evaluate ideas, information,

organization and language of a wide range of general and technical texts and presentations across subject areas. Is this one of the specific types of skills, that you were referring to that is relevant for voting?

A Yes. I mean, this is very directly relevant, and it was one of the things that the council had in mind. If you notice further on, when it gave examples of the kinds of things students should be able to do, we included such things as comparing decisions and opinions in court cases, and evaluating speeches of political candidates and stands on different issues. You will see in the curriculum framework and the various kinds of assessments that these issues are reiterated in several different contexts, as part of what students should learn how to do.

Q And let's turn now to the learning standards in social studies, which is Plaintiffs' Exhibit 322. And I'd like to look at Standard 5.3, both in the elementary level and the commencement level. So first let's look at the elementary level -- no, it is not Page 22. I think I've got the wrong page. A It is probably back at around page -- it is further back, Standard 5, 28, 27. Elementary is on Page 25 and 24.

Q Okay, on Page 24, under elementary. Now, this is the standard that requires students to demonstrate their understanding of the necessity for establishing governments, the governmental system of the United States and other nations, the U.S. Constitution, basic civic values of American constitutionality, roles and responsibilities of citizenship, including avenues of participation. And the third subsection of this standard states that, "Central to civics and citizenship is an understanding of the roles of the citizen within the American constitutional democracy, and the scope of a citizen's rights, for example, and students who have these skills understand that effective, informed citizenship is a duty of each citizen, demonstrated by jury service, voting and community service." Now, this is a skill that students are expected to learn at the elementary level. Why would you have references to voting in jury service at the elementary level which is obviously far away from the age at which students could carry out these responsibilities?

A All of the learning standards in the curriculum frameworks understand that education is a cumulative activity and so everything that's represented at the commencement level really begins much earlier. It was the strong feeling of counsel and the committee that developed these particular standards that students needed to begin to understand these roles and these obligations and how the system functions early on and continued to work on that throughout elementary and middle school and high school.

Q Well, let's turn then to the same standard at the commencement level, and this is the level of students who are at graduation age, I believe. And I see we've got the same basic standard, "Central to civics and citizenship is an understanding of the roles of the citizen within the American constitutional democracy, and the companion standard talking about the study of civics and citizenship requires the

ability to probe ideas and assumptions, ask and answer analytical questions, take a skeptical attitude towards questionable arguments, evaluate evidence, formulate rational conclusions, and develop and refine participatory skills." And "At this stage, students are expected specifically to participate as informed citizens in the political justice system and processes of the United States, including voting", and goes on to talk about "having the skills to take, defend and evaluate positions about attitudes and facilitate thoughtful and effective participation in public affairs". And further down the page, "preparing plan of action that defines an issue or problem, suggest alternative solutions". And if we move along, one of these examples of performances that demonstrate the skills are "proposing several alternative solutions to the problem, assess ethical implications as well as comparative costs and benefits for each alternative approach to resolving the issue of a problem and defend a solution". And at the way bottom, I see that "students will be expected to critically analyze historic Supreme Court cases to determine how well they reflect the intent and spirit of the constitution then and now". Could you tell us from your perspective, Dr. Darling-Hammond, how these kinds of skills relate to the ability to function productively as a civic participant in regard to voting?

A Well, obviously when one is involved in evaluating positions and different issues which are complex, the kinds of issues that are coming to citizens to vote on in referenda as well as just voting for candidates, it was the judgment of the committee that developed these that all of these skills are really required, in weighing and balancing and being able to interpret and understand evidence and trying to figure out what kinds of costs and benefits and trade-offs there are in anything from evaluating, you know, propositions about nuclear power or other scientific matters to propositions that have to do with public policy concerns in the social arena. So the committee that developed these, which included teachers of social studies, political scientists and other citizens, really based their judgment of what citizenship required on the modern tasks of citizenship in today's society.

Q Dr. Darling-Hammond, do you have an opinion as to whether students who have mastered the learning standards which include the skills that we've just discussed would in fact have the skills to function productively as voters? A I think we can have a strong confidence that students who have mastered these standards would be able to be informed and knowledgeable voters.

Q Now, in regard to voting, I would like to turn to a very specific question, and this in fact is a question that was proposed by the Court. On November 3, 1999, the day after Election Day this year, Justice DeGrasse referred to the actual ballot that was before the voters the previous day and introduced that ballot into evidence as Court Exhibit IV. So I would like to now hand you a copy of that exhibit.

MR. REBELL: It is a Court Exhibit so we don't have it. I guess if it is a Court Exhibit --

THE COURT: When the clerk comes back, you will get it.

MR. REBELL: Your Honor, I believe we have a copy. If your Honor would like to look at it and just ensure that it is the same document?

THE COURT: We'll have it momentarily. Here you are, Mr. Rebell.

Q Dr. Darling-Hammond, have you ever seen a copy of this ballot which was Court Exhibit IV in evidence in this case before?

A Yes.

Q Is it in fact -- did I in fact send you a copy of it to analyze in preparation for your testimony today?

A Yes.

Q Now, I'd like to focus your attention on the proposal number 2 on the right-hand side of the document, proposal number 2, which says A Question, Charter Change. And the precise question that Justice DeGrasse asked the parties to have our experts testify to was, "Whether people educated in the schools of this city are sufficiently skilled in English-language arts, to be able to comprehend a document such as the charter revision issue on the ballot." And I believe this is the charter revision issue that Justice DeGrasse was referring to in posing that question. Have you in fact had a chance to review and analyze that charter revision proposal?

A Yes.

Q Then what I would like to ask you to do in order to specifically respond to the Court's question, pupils educated in the schools of this city actually fall into I believe three categories. So I'm going to ask you to answer the question in regard to each category of student. The first category would be students who graduate from the New York City schools with a local diploma, and a local diploma requires these students to pass the Regents Competency Tests, a number of which I gave you were sample copies. Now, you have in fact reviewed those Regents Competency Tests?

A Yes.

Q So my first question would be, for students who have the skills required to receive a diploma based on the Regents Competency Tests, do you have an opinion as to whether they are able to comprehend this specific charter revision issue in Court Exhibit IV?

A Let me answer that in two ways. First of all, the charter proposal requires a great deal of underlying content knowledge about how the city operates, how city government operates and so on, what it means to change a charter, what would be alternative uses of the city surpluses that in the second bullet proposed here would be used for budget stabilization and so on. But putting aside all that content knowledge, which is in fact pretty complicated in and of itself, just at the level of understanding the text and what it means in terms of the reading level, someone who had just barely passed the regents competency exam and was reading exactly at that level would have a difficult time understanding this text. Obviously, someone who easily passed that exam might be able to comprehend it. But this is a kind of text that is much more challenging than the text on the regents competency exams in English, for example.

Q Well, I'd like to bring to your attention and put up on the screen some actual questions from the competency test in reading. And since we have already had it admitted into evidence, I'm referring to Plaintiffs' Exhibit 1413 in evidence. Dr. Darling-Hammond, can you explain to us the reading abilities that are reflected in the passages that are on this RCT exam?

A Let me start by saying that the sample that's on the screen and that's before you is the kind of item that constitutes the entire test. All of the items are of the same kind: They pose a paragraph, they give multiple choice responses of words that might fit in the paragraph, and they are at about the same level of difficulty. What you can notice if you look at the text here is that first of all, there is very little technical language. The language is pretty much straightforward, narrative. It features fairly short sentences with fairly simple words and rarely will you find a word that is more than two syllables long or that is not sort of in the general popular vocabulary that people use in their speech. In addition, the students have prompts of words that they are going to insert so they can choose from among those featured in the margin which one they would select. So it is a fairly simple task in that regard. And the words are very straightforward: shouting, crowd, clothing, snow. There is no technical language featured here. So the reading skills that are required, the decoding skills are at a quite rudimentary level.

Q Let's compare this with the vocabulary and types of skills that one would need to comprehend the actual charter revision proposal.

A It is just at the level of decoding the text, again not including the underlying content knowledge one would need to make sense of this. If you just look at the second bullet, "creating a budget stabilization and emergency fund out of city surpluses to fund emergency needs or other needs as determined jointly by the Mayor and the city council and, if not spent, to prepay debt; limiting city government", et cetera, you can see that first of all the syntax and the construction of the phrases and clauses is much more complex. You have to be able to parse a much more complicated sentence structure, to figure out how the various clauses even relate to one another, and the level of the vocabulary is

both more complex and in some cases more technical; for example, what is budget stabilization and so on. So it is at a much more complex reading level than what the RCT examines.

Q Now, the second category of students I would like to ask you about is students who do not actually obtain diplomas from the New York City school system, and evidence in this case indicates that between 30 and 40 percent of those who went through the 9th grade in New York City high schools do not in fact --

MS. ROSEBOROUGH: Objection; move to strike. Mr. Rebell is testifying and not asking questions.

MR. REBELL: I'm just referring to evidence that is already in the record in the case.

THE COURT: Overruled.

Q Approximately 30 to 40 percent of those who went through 9th grade do not graduate at least four years later. Would those students have the skills to be able to comprehend this charter revision proposal, in your opinion?

A Well, it is possible that some of them would, but one would have little confidence that most of them would, particularly if they failed to graduate because they failed the exams, the RCT exams.

Q And now at this point I'd like to bring to your attention plaintiffs' exhibit in evidence 1962 which was the June, 1999, regents language arts exam. And this is the exam required to receive the regents diploma and will soon be required of all students under the new learning standards requirements as distinguished from the RCT. And specifically in this regents level English examination, I'd like to bring to your attention Page 5. And this is asking the test-taker to write a report regarding a certain situation. It says, "Your social studies class has been studying the history of child labor. You have chosen to write a report summarizing some provisions of current New York State law regarding the employment of children and discussing the conditions that may have led to those provisions". And I see there are a series of guidelines for what should be placed in that report, and a chart which is somewhat illegible that apparently contains some information about permitted working hours for minors which would be a factual basis for this report. And then there is a background section, early history of child labor, which students I presume are intended to read and utilize in writing this report. Can you comment, Dr. Darling-Hammond, for us on what types of reading skills this document represents and relate those to the charter revision proposal that was on the ballot?

A If you look at the text that you just had up there on Page 7 and following, it is a three- or four-page piece of text, three and a half pages, one of the things you

can notice, first of all, is the kind of text that's offered includes more complex higher level vocabulary and more technical construction of the text and uses of the vocabulary. So it is much more close in its level of reading tested to what we saw on the ballot. For example, on the second paragraph you have in the third sentence, "This permitted a division of labor and a degree of specialization among various families. Pay was by the piece and children were used extensively at whatever tasks they could perform." Even such commonplace language as "specialization", "extensively" and terms like that would rarely be found on something like the Regents Competency Test. This is a more complex kind of vocabulary that is more like what they would have to understand on the ballot. If you go back to the test they are asked to do, it requires much more analytic reading and much greater ability to make sense out of the text. Under the guidelines, they are told to, in the third bullet, "Use specific, accurate and relevant information from the chart and the text to support your discussion". In the first bullet, they are told to "Tell your audience what they need to know about some provisions of current New York State law regarding the employment of children". In order to do that, they have to be able to read the text with sufficient level of understanding to actually draw out elements of the provisions and be able to relate that they have to be able to relate those provisions in a cause effect manner to conditions that may have led to them, so they have to be analytic in their reading, and they have to be able to support their ideas with evidence. So they are going through a reasoning process of understanding evidence and then applying it to a conclusion. So it is both a kind of reading and a use of text that prepares them to do the kind of analysis that's needed to vote on the kind of provisions that we saw.

Q Dr. Darling-Hammond, based on your analysis of the regents examinations, is it your opinion that a student that graduates from the New York City Public Schools with a regents diploma would be capable of comprehending the charter revision proposal that is before us?

A I think there would be a very high likelihood that a student who had passed the Regents exam, this one based on the new standard, would be able to handle this kind of text and understand it.

MR. REBELL: Before we go on to some further questions about jurors, this might be a good time to take a break.

THE COURT: All right.

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**Testimony of Dr. Linda Darling-Hammond, Charles E. Ducommun professor at Stanford University and Executive Director of National Commission on Teaching & America's Future, December 14, 1999 (continuation)**

BY MR. REBELL:

Q I'd like to now turn to the question of qualification of students to function productively as civic participants, capable of serving on a jury. In that regard, I'd like to bring to your attention, Dr. Darling-Hammond, Plaintiff's Exhibits Numbers 1415 through 1421. And the first four of these are what are called pattern jury instructions, which were taken from a book published by West Publishing, entitled "New York Pattern Jury Instructions," prepared by the Committee on Pattern Jury Instructions and the Association of Supreme Court Justices. The second is a statement of a New York State pattern jury instruction on reasonable doubt for jurors from the New York Law Journal, November 5, 1999. And the last is an article from the New York Law Journal, on standard jury charges.

Q I would also like to bring to your attention documents that have been premarked as Plaintiff's Exhibits 1867 and 1867-A, which are the special verdict form and the transcript of the judge's charge to the jury from a case that was -- in the United States District Court for the Southern District of New York, in 1996, before the Honorable Sidney H. Stein, case is Antreassian versus Chemical/Manufacturer's Hanover Trust Company.

Q The third set of documents, which have been marked for identification as Plaintiff's Exhibits 1868 and 1868-A through E, are the transcript of the judge's charge to the jury, and four of the exhibits introduced into evidence, as well as a set of juror interrogatories, from the case of Stahl versus Rhee, which was heard before Peter Cox Cohalan in the Supreme Court State of New York, Suffolk County, during the spring of 1999.

Q Now, Dr. Darling-Hammond, do you recognize all of these documents as a set of materials that I sent to you and asked you to use in preparing for your testimony here today?

A Yes.

Q Have you, in fact, reviewed these documents in preparation for your testimony?

A Yes.

Q And will you be relying on these documents in forming your opinion on the skills that graduates of the New York City school system, and students who have attended but not graduated from the New York City school system, need in order to function productively as jurors?

A Yes .

MR. REBELL: Your Honor, I move into evidence the various documents that have just been cited.

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Q Dr. Darling-Hammond, before we go into the various jury instructions, I'd first like to bring to your attention another document, and this is another Court Exhibit, it is the juror qualification questionnaire for New York County that Justice DeGrasse has also asked us to have our experts review.

THE COURT: Court Exhibit 14. It is on the way out. (Handed to the witness.)

Q I believe that this is the actual juror qualification questionnaire that is mailed to potential jurors in the State of New York, or at least in the City of New York. Dr. Darling-Hammond, have you seen this document before?

A Yes.

Q Have you had a chance to review its contents?

A Yes.

Q Again, Justice DeGrasse had asked us to have our witness -- an expert witness address the question of whether students who have attended the New York City public schools would be capable of comprehending this document. Do you have an opinion on that subject?

A Students who have dropped out or failed to graduate or failed the tests, you know, one would have no reason to believe that they necessarily could understand this document. For those who have minimally passed the Regents competency test that we looked at earlier, it is plausible that they could understand this document. There are a few terms that might be problematic, like "exemption" or "certification." But, in general, it is written in fairly simple language, and it is -- it uses relatively little text, so it is possible that they would be able to understand most of what's on this document.

Q And what about students who have graduated from the New York City public schools with a Regents diploma?

A They would certainly understand everything on this piece of paper. Those who have met that higher standard.

Q Okay. That's -- I would like to turn to the other documents to focus more generally on the question of the skills that students need to function productively as civic participants capable of serving on a jury. And let us go back then to the pattern jury instructions, which were Exhibits 1416 through 1420 in evidence. Do

you understand, Dr. Darling-Hammond, that these are examples of standard instructions that judges in the State of New York give to juries, as may be appropriate in particular cases? A Yes.

Q In your expert opinion, would students who have graduated from the New York City public schools with local diplomas, that is, meeting the RCT requirements, have the skills to comprehend these instructions?

A It would be questionable in several cases. If they had just barely met that RCT standard, that they'd understand everything that was in these instructions in a couple of ways.

Q Are there any that you would like to use as particular examples to illustrate your answer?

A Well, you could -- let's look at 1421 for a moment. They follow a common format, although there are some specifics that vary from one to another. There are several aspects of this. One is that the kind of language that's used and the sort of extent to which you have to be able to understand long sentences that have many subphrases and clauses and so on is fairly complex; whether it is done on a reading basis or on an oral basis. For example, the first paragraph is one long sentence. "If plaintiff's automobile property was damaged by the defendant's "negligence," that's a technical term, "you will award the plaintiff, as damages, the difference between its market value immediately before and immediately after it was damaged, or the reasonable cost of repairs necessary restore to its former condition, whichever is less." You can see -- I won't read it all aloud, but you can see that the next paragraph, and similarly in the others, includes not only some technical terms, but -- and some complicated syntax, but also some ability to understand calculations. For example, between market value immediately before and immediately after. So, on several levels, this has kinds of knowledge and skills that are not represented in the RCT exams that students currently would have to pass. And if you look at -- most of them also require some kind of judgment about reasonable -- what is a reasonable decision in various context. Let me find one that would --

Q Were you referring to the criminal justice charge about reasonable doubt?

A Yeah, that would be one of them. The juror not only has to understand these instructions, which can be difficult for some people to understand; but they also have to be able to evaluate what a reasonable person acting in a manner of this importance would be likely to undertake, because of the evidence or because of the lack or insufficiency of the evidence in the case. So they also have to be able to understand what it means to weigh and balance the evidence and what it means to act reasonably, given the evidence. So there's an analytic process of following these instructions that was not represented in any of the expectations conveyed in the standards that undergirded the Regents competency tests.

Q Are additional skills required for individuals to comprehend this information if they receive it orally as against reading it?

A Yes. People do process information differently, orally and visually, and certain kinds of listening skills, the ability to receive and process information orally are needed if the judge reads these and they have to be comprehended that way. Listening skills were not evaluated under the old standards that the Regents Competency Tests represent. They are represented in the new learning standards that are being evaluated in the new assessments in New York State.

Q In that regard, I'd like to bring to your attention one of the learning standards in English-language arts, and that's in Plaintiffs' Exhibit 318, which has been admitted into evidence. And this is under Standard 1 in listening and reading.

A It is exactly the kind of -- this standard, as well as Standard 3 that we looked at earlier reflects the kind of both listening to text and reading of text that's needed to interpret and analyze complex informational text, and also to be able to make distinctions about, if you look at the fourth bullet down, about the relative value and significance of specific data, facts and ideas, which is what you would need to be able to do to evaluate what's reasonable, what the evidence suggests or the lack of evidence suggests might be a reasonable conclusion or pose a reasonable doubt in a case like the ones that we were considering.

Q Now, let's turn to the Plaintiffs' Exhibit 1867 and 1867-A which were the federal case. First I'd like to turn your attention to Page 491 of this transcript of the judge's charge. And this is a summary, I believe, of the nature of this case. "The plaintiff, Michael Antreassian, has brought a claim alleging that the defendant, Chemical Bank, discriminated against him because of his age. Specifically, he asserts that Chemical Bank violated the law by terminating his employment because of his age. Chemical Bank denies Mr. Antreassian's allegations and alleges that a discharge came for falsification of his timesheets and because of his lack of candor during the investigation into the discrepancies in his timesheets." So this appears to be a case of employment discrimination, is that correct?

A Yes.

Q And have you reviewed this charge to the jury in preparation for your testimony here today?

A Yes.

Q In your opinion, Dr. Darling-Hammond, would graduates of the New York City Public Schools who have local diplomas based on RCT level skills be able to comprehend this charge and the instructions to the jury?

A This portion of the charge is not particularly complicated. But if you move on to the next page, 492 --

MS. ROSEBOROUGH: Objection, and move to strike.

THE COURT: Objection sustained. Strike it.

Would graduates who had just basically passed the RCT standard be able to understand this portion of the charge?

Q Yes, that was the question. Not this portion, this entire charge.

A The entire charge being this entire document. It would be difficult for them to understand the entire charge as contained in this document. And one would have very little confidence that someone who had just met that standard would do so.

Q Let me bring your attention to some specific passages from the charge and ask you to specifically comment on those in light of your response to the previous question. On Page 481, we have a statement, this is from the judge to the jury, "You appraise the credibility of each of the witnesses that you heard on the witness stand. You draw the reasonable inferences from the evidence or lack of evidence." Do you have a comment on how that relates to the ability of students at the RCT level to comprehend this document?

A Let me say that in the standards that are functioning at the basic RCT level of the examination system that has existed in the past, there is nothing that asks for students to weigh and balance evidence to establish the credibility or believability of evidence, to draw inferences from evidence or lack of evidence. And aside from the issue of understanding the content of the case, those skills are not part of what one could be guaranteed that students would have acquired if they are at that level of performance as represented by basic passage of the RCT.

Q Let me turn your attention to another specific passage from this set of jury charges. This is on Page 490. This is a paragraph dealing with what the preponderance of evidence means. "To establish a fact by a preponderance of the evidence means to prove that the fact is more likely true than not true. It means the greater weight of the evidence. It refers to the quality and persuasiveness of the evidence. It does not refer to the number of witnesses or the number of documents. In determining whether a claim has been proved by a preponderance of the evidence, you may consider the relevant testimony of all witnesses, regardless of which side called them and all of the relevant exhibits received in evidence regardless of who produced them and who was introducing them into evidence." Now, how would a person who has the RCT level skills be able to respond to this type of charge?

A If they only have that minimal level of skill, we have no guarantee that they would have had any practice or proficiency in being able to understand how to weigh the evidence, how to decide what the preponderance of the evidence might mean, what kind of testimony is credible and how to use the evidence in drawing an opinion. The charge goes on to give very specific, complicated instructions about how to manage the evidence, how to decide on credibility, what to do if one side -- if the evidence seems to be evenly divided and so on. So it is a very complex analytical reasoning process that the jurors are asked to undertake in deciding what the preponderance of the evidence suggests.

Q Now, the types of skills that a juror would be need to be able to comprehend this charge, I believe you mentioned in your opinion are contained in the learning standards, is that correct?

A Yes, they are. You will find specific references to weighing, learning to weigh and evaluate evidence and its credibility, to draw conclusions from evidence and inferences in the social studies standards, in the English-language arts standards, and even to some degree around deductive reasoning in the mathematics standards.

Q Let's quickly look at a few of those. In regard to English-language arts, that again was Plaintiffs' Exhibit 318 in evidence. Let's turn to Page 12. And this is Standard 3, which I believe we had discussed earlier, listening and reading skills. And students with these skills should be able to analyze, interpret and evaluate ideas, information, organization and language of a wide range of general and technical tasks and presentations across subject areas, including technical manuals, professional journals, political speeches and literary criticism. Are these the kinds of skills you are referring to that would be relevant?

A They are. And if you look down at the third bullet as well, "Make precise determinations about the perspective of a particular writer or speaker by recognizing the relative weight they place on particular arguments and criteria. " So that being able to understand the argumentation and reasoning, as well as the self-interest that different parties may have and the line of reasoning is part of what is embodied in the curriculum frameworks that come from these standards, and in the assessments that are used to evaluate the standards.

Q Okay. You mention social studies. Let's take one example from the learning standards for social studies. And that's Plaintiffs' Exhibit 322. And I'm going to refer to Page 7, Standard 1.4. This is the standard about students using a variety of intellectual skills to demonstrate their understanding of major ideas, themes, developments and turning points in the history of the United States and New York. And substandard 4 there, which talks about "skills of historical analysis, include the ability to explain the significance of historical evidence, weigh the importance, reliability and validity of evidence, understand the concept of multiple causation, understand the importance of changing and competing interpretations

of different historical developments." And lower down in the bullets where we have highlighted it, "students with these skills are expected to evaluate the validity and credibility of historical interpretations of important events". Do you think these skills relate to a potential juror's ability to understand the kind of text from the jury charge we just read?

A Yes. And I think it's important to point out that while this relates to historical analysis in particular, developing the habits of mind and ability to do this kind of weighing and balancing of evidence is a generic skill that cuts across content areas. And there are similar kinds of skill development pointed to in the science standards and English-language arts standards and history standards and so on. Together they create the framework for an educational condition in which students will be asked to do this kind of work over and over again, weighing and balancing evidence, understanding fact and opinion. If you look down further under this is evidence, for example, when students -- I am looking at the page previous for intermediate, but here is it also talks about "and analyzing competing interpretations of issues or problems". In the intermediate standards, it also talks about examining documents relative to different positions. So that the skills that students need to be able to handle evidence bases are developed throughout this process. The standards documents, by the way, are more than simply urgings or encouragements for what schools ought to do. These documents are sort of the tip of an iceberg which then includes curriculum frameworks, specific curriculum work that students need to do, and then the assessments that test those. So they translate into the actual work in the classroom that students do.

Q Okay. I'd just like to bring to your attention one more passage from the Antreassian case on Page 496. And this is the explanation of the preponderance of the evidence. "It is the plaintiff's burden to persuade you by a preponderance of the evidence that the defendant discharged him because of his age. If you do not believe the defendant's explanation for its actions, then you may infer, but need not infer, that the plaintiff satisfied his burden of proof that the defendant intentionally discriminated because of his age if you find that the plaintiff has established, by a preponderance of the evidence." And in this connection, I would like to ask you whether any of the learning standards in mathematics, science and technology would be particularly relevant to a student's ability to understand this charge?

A Well, this charge, as it continues below the highlighted area and on to the next page, gives a number of specific conditions that have to be understood --

MS. ROSEBOROUGH: Objection.

THE COURT: Sustained. It is not responsive to the question.

Q If you could respond to the question and then we can also ask further questions.

A Okay.

Q Does this particular paragraph relate to any of the learning standards in mathematics, science and technology?

A This charge in its entirety relates to the standards about deductive reasoning and reasoning from logic that are in the mathematics standards.

Q Let me just quickly bring your attention to the math and science standard which is Plaintiffs' Exhibit 320. And on Page 6, I'd like to ask you to respond to Standard 1.2.

A When it talks about deductive and inductive reasoning that are used to reach mathematical conclusions, conjectures and arguments, the kinds of reasons that are represented, for example, for proofs and logic that are part of the curriculum that relates to this standard are very much the same reasoning that a juror would have to go through as they evaluate each of the terms and conditions that were reflected in the case we were just looking at.

Q All right. And let's go back to the case then. I believe that you thought some further text on Page 496 was worthy of mention in this regard, so let me put that up again and ask you if you believe that the further text on that page further illustrates this point.

A The text goes on to ask the jurors to evaluate a number of conditions that would need to be satisfied in order to find for the plaintiff in this case. So they need to be able to evaluate in a deductive fashion the applicability of each of these conditions. And then as it goes on to the next page, "If you find that the plaintiff has established this initial burden", which is one set of logical deductions that have to be made, they then go on to have to make additional judgments about whether in the paragraph that says, "In reaching this decision, you should consider whether there is evidence that those reasons contain inconsistencies or are plausible or absurd. In making that evaluation, you may focus on whether the reasons the defendant has given are consistent with its own policies and rules", et cetera. The chain of logic that goes on actually for a couple of pages here requires a great deal of ability to reason logically from a number of presumptions and synthesize those pieces of evidence and then weigh and balance them around these issues of burden of proof as well as preponderance of evidence.

Q Now, let's turn to the last case, the Stahl case, which was heard recently in Suffolk County Supreme Court, and that is Plaintiffs' Exhibit 1868, is the basic jury charge. First I'd like to turn your attention to Page 4847, which again gives a summary of what this case was about. And this one, "The plaintiff's contention that as to the defendant Sterling, that (a) the defendant Sterling was negligent in the manufacture and sale of a product with no safe level of exposure to hexachlorophene, (b) that the manufacture and sale of the product should not

have been available for use by a layperson at all, (c) the manufacture and sale of a product that contains an unreasonably dangerous defect, its neurotoxic potential, (d) the manufacture and sale of a product where the risks and harm outweigh the benefit to be derived from the use of this product." As a summary of what the nature of the case is, how would you compare this to the Antreassian case, the case we just reviewed quickly in the past few minutes?

A Well, this case contains a lot of technical information. It relies on some scientific knowledge bases and tackles some issues that are -- well, some are the same issues of what's reasonable and so on. It has a lot more complex, both ideas and concepts associated with it, and then just the text of the kinds of terminology that are used are much more complicated.

Q Do you have an opinion as to whether a student who has skills at the level required by the RCT's would be capable of comprehending a jury charge in this case?

A I would think that a student who just had the level of skill represented by the passing score on the RCT would have a great deal of difficulty of both in terms of understanding the terminology and vocabulary and so on in the case, but also having seen the science exams and standards that existed under that standard, also understanding the scientific issues.

Q Now, in regard to the additional scientific and other complex issues that are in this case, and I believe you said there were more of them than in the previous case, would the learning standards address those specific skills and prepare a student who has mastered the learning standards to be able to comprehend this charge?

A Yes. Both on the level of just understanding the terminology and the vocabulary and also with respect to understanding the underlying scientific issues, including the kinds of evidence that needed to be evaluated in the course of the trial around various scientific tests of the safety of this chemical drug.

Q Well, let's just quickly look at a few specific examples from this case. I'm going to turn your attention to Page 4882 of the charge, and the second full paragraph there, which talks about "The testimony of plaintiff's expert was based on statistical tables. Such tables are, of course, nothing more than statistical averages. They neither assure that the plaintiff will have the span of working life I have given you nor assure the plaintiff's span will not be greater." I'd like to ask you to comment on the skills needed to comprehend this kind of charge in relation to two specific learning standards in the math learning standards and social studies learning standards. So turning first to the math standards, Standard 3 on Page 25, would this standard be relevant to a student's ability to understand the passage that we just read?

A Yes. And also to understand the underlying document which was an analysis of the economic loss to the plaintiff of the injuries sustained. There is an exhibit in that case which requires that the jurors be able to understand tables --

MS. ROSEBOROUGH: Objection, your Honor, I object.

THE COURT: Sustained. Strike everything out after yes.

Q Why don't you begin your answer again and leave out the references to any underlying text.

A Okay, which you will show, I presume, at some point. Yes. The text refers to statistical data that the jurors had to evaluate graphs and tables. The standard relates to the expectation that students will learn to interpret and analyze graphs and tables. There is another standard as well that relates to their ability to apply and interpret statistics which is also relevant to that passage.

Q Well, let me just turn to social studies standard number 4 on Page 22. This is Plaintiffs' Exhibit 322. Is this the standard you were referring to, Dr. Darling-Hammond? This is under economics?

A This is yet another standard that replies to the judgment the jurors were making as they tried to understand the economic loss to the plaintiff. They had to be able to understand economic concepts, such as opportunity costs and so on. And so the economic standard, which is part of social studies, does relate as well to one of the tasks the jurors had to do to comply with those instructions.

BY MR. REBELL:

Q We have basically made the point here, but I just want to make a few more references to the exhibits in the Stahl case. Let's first, in that regard, to Plaintiff's Exhibit 1868-B, this was an exhibit introduced into evidence in that -- in this case. Do you have a sense of what this exhibit is illustrating, Dr. Darling-Hammond?

A Yeah. This exhibit is a table that shows the results of different studies, about how exachlorophene, which is a component of the drug PhisoHex, is absorbed into the human bloodstream. It provides data that the jury needed to understand about the risks associated with using different amounts of that drug, and that was one of the points of contention in the case.

Q All right. And I believe you were indicating earlier that you believe Math Standard 3 was particularly relevant to this exhibit; is that correct?

A Yes. The ability to understand and analyze functions using tables and graphs is relevant to this to the juror's ability to understand this.

Q Okay. Let's turn to Plaintiff's Exhibit 1868-A, another exhibit in the Stahl case. This is a technical article from a medical journal, I believe; is that correct?

A Yes.

Q All right. And I would like to ask you whether Learning Standard 1.1 under mathematics, page six of the Math Science Learning Standards, would help a potential juror comprehend that kind of complex material.

A The one under mathematical analysis is not the one that I would point to. I would point to the one under scientific inquiry. What students need to be able to do to satisfy this is to understand how to develop a hypothesis and test it, and understand how to reconcile competing explanations and scientific experiments. Further on, if you go down the page and on to the next page, that standard as a whole relates to students' abilities to understand statistical analysis, which is represented in this article and others, that the jurors had to consider to evaluate the scientific base. And also to understand whether the predicted result, when they tested the hypothesis about the safety of this drug, actually was supported by the evidence that was produced. So the ability to understand the scientific method and the evidence based on what these kind of studies produce is critical to be able to judge the credibility of this article as a piece of evidence in the trial.

Q All right. And the last of the exhibits that I would like to bring to your attention is Plaintiff's 1868-D, which is an appraisal of the economic loss by the personal injury to the plaintiff. And turning to the first page of that document, the analysis tells us that, "In order to estimate the economic loss to Timothy Stahl as a result of the incident occurring in February of '77, it was necessary to specify his statistical cohorts. A statistical cohort is a group of individuals with which the plaintiff can be most readily identified and about which we have statistical information. It is necessary to consider the typical or average person of these statistical cohorts. Timothy is assumed to be totally unemployable. The economic loss consists of the gross value of the sum of Timothy Stahl's annual earnings plus fringe benefits from the date of his probable high school and/or college graduation to the statistically expected end of his work life. "In addition, an estimate has been made of the gross value of the cost of his future (from anticipated trial date to the end of life expectancy) life care plan, in a separate report." Now, in regard to the juror's ability to comprehend that type of report, I would ask you to consider the relevance of social study standard 4.2, which is on page 23 of Plaintiff's Exhibit 322.

A This is part of the standards that have to do with economics. And the kind of economic analysis that's done here draws both on this set of skills and being able to understand economic information in a variety of formats which is identified in the first bullet, and to identify economic problems or issues which is -- investigate and analyze selective data which is referenced in the third bullet: Consider alternative solutions or positions. So there is a whole set of standards here that

deal with the ability to understand economic decision-making. Earlier we also looked at standards that dealt with the mathematics, the ability to understand the statistical tables that are also included in that report. I would note that these standards with respect to, for example, economic decision-making, as well as the understanding of statistical information, are standards that are represented in the new learning standards, and are not represented in the Regents competency testing standards that we considered in the earlier set of exams.

Q All right. Now let me ask you an overall question based on all of the jury charges that we have talked about today, and all of the materials that you have analyzed in presenting your opinion today. And the question is, based on your analysis of all of these documents, Dr. Darling-Hammond, do you believe that graduates of New York City public schools, whose skills are at the level required by the RCT exams, can function productively as civic participants, capable of serving on a jury? A Based on all of what we've looked at, and a student who just passes at the RCT level, will not necessarily have acquired many of the skills that are necessary to be an effective juror or voter, including those skills needed to analyze and interpret and weigh and balance the evidence in cases like these.

Q And in the case of students who attend New York City public schools, but do not graduate with a diploma, do you have an opinion as to whether they have the skills to function productively as civic participants capable of serving on a jury?

A It would be very unlikely that they would have the set of skills.

Q All right. And, finally, based on that, your analysis of all of these documents, Dr. Darling-Hammond, do you have an opinion as to whether students who have passed the Regents level examinations would have the skills necessary to function productively as civic participants, capable of serving on a jury?

A Let me clarify that. I'll be responding with respect to the new examinations that are being developed or, in some cases, already have been developed, with reference to these learning standards. And in that case, I think that the answer would be --

MS. ROSEBOROUGH: I object to her testimony to the extent that she's offering an opinion to be based on materials that have not been provided to the state, and particularly it sounds like aren't even generally available at this time.

THE COURT: Overruled. The witness indicated that she is clarifying some part of her answer.

A With respect to those new learning standards and the associated examinations, I would say yes, there's a high probability that students who have achieved those standards would be able to perform all of the kinds of analyses

and interpretations that we have examined in these cases and that are widely required in others.

MR. REBELL: Your Honor, I have a bit more direct. But this might be an appropriate point to end for today, if you would like.

THE COURT: Yes. We will break for the day. This court stands in recess.