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School Finance Litigation: McCleary v. State of
Washington

10-13-2009

**Reporter's Verbatim Report of Proceedings, October 13, 2009,
Volume XXI - Sessions 1 and 2 [Pages 4551-4674] 07-2-02323-2**

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1 IN THE SUPERIOR COURT OF THE STATE OF WASHINGTON

2 IN AND FOR KING COUNTY

3 _____

4 MATHEW and STEPHANIE McCLEARY,)
 on their own behalf and on)
 5 behalf of KELSEY and CARTER)
 McCLEARY, their two children in) SUPREME COURT OF WA
 6 Washington's public schools;) No. 84362-7
 ROBERT and PATTY VENEMA, on their)
 7 own behalf and on behalf of HALIE)
 and ROBBIE VENEMA, their two)
 8 children in Washington's)
 public schools; and NETWORK)
 9 FOR EXCELLENCE IN WASHINGTON)
 SCHOOLS ("NEWS"), a state-wide)
 10 coalition of community groups,)
 public school districts, and)
 11 education organizations,)
)
 12 Petitioners,) KING COUNTY CAUSE
) No. 07-2-02323-2 SEA
 13 vs.)
)
 14 STATE OF WASHINGTON,)
)
 15 Respondent.)

16 _____

17 REPORTER'S VERBATIM REPORT OF PROCEEDINGS

18 --oOo--

19 TUESDAY, OCTOBER 13, 2009
20 VOLUME XXI - Sessions 1 and 2

21 --oOo--

22 Heard before the Honorable John P. Erlick, at King
23 County Courthouse, 516 Third Avenue, Room W-1060,
24 Seattle, Washington.

25 --oOo--

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A P P E A R A N C E S :

--oOo--

THOMAS F. AHEARNE, CHRISTOPHER G. EMCH, and
EDMUND W. ROBB, Attorneys at Law, appearing on behalf
of the Petitioners;

WILLIAM G. CLARK and CARRIE L. BASHAW, Assistant
Attorney Generals, appearing on behalf of the
Respondent;

JOHN R. MUNICH, Special Assistant Attorney General,
appearing on behalf of the Respondent.

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CHRONOLOGICAL INDEX

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TUESDAY, OCTOBER 13, 2009 - Morning Session

DR. ROBERT MICHAEL COSTRELL

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EXHIBIT INDEX

--oOo--

EXHIBIT

ADMITTED

1339

4615

1340

4562

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1 SEATTLE, WASHINGTON

2 TUESDAY, OCTOBER 13, 2009

3 MORNING SESSION - 9:00 A.M.

4 --oOo--

5 THE COURT: Good morning. Please be seated.

6 We're back on the record. We are on the
7 record in the matter of McCleary versus State of
8 Washington, King County 07-2-02323-2 Seattle. And we
9 remain in the respondent's case in chief.

10 And, Mr. Munich.

11 MR. MUNICH: Good morning, Your Honor.

12 THE COURT: Let me just ask if there are any
13 preliminary matters before we have you call your next
14 witness.

15 Anything from petitioners?

16 MR. AHEARNE: No, Your Honor.

17 THE COURT: All right. Anything from
18 respondent?

19 MR. CLARK: No, Your Honor.

20 THE COURT: All right. Very good.

21 Mr. Munich.

22 MR. MUNICH: Your Honor, the state calls as
23 its next, Dr. Robert Costrell.

24 (Witness sworn in by the court.)

25 THE COURT: Thank you. Please be seated.

1 For the record, doctor, please state
2 your full name, spell for us your last name and give us
3 your contact address.

4 THE WITNESS: My name is Robert Michael
5 Costrell. That's C-O-S-T-R-E-L-L. My contact address
6 is 201 Graduate Education Building, University of
7 Arkansas, Fayetteville, Arkansas 72701.

8 THE COURT: Okay. Thank you, doctor.
9 And thank you for your patience yesterday, and we had
10 hoped to get to you but we did not, so --

11 THE WITNESS: Well, I learned how to iron my
12 shirt using the hotel iron, and I think my wife of 26
13 years will be very appreciative of that. So everything
14 has its good side.

15 THE COURT: You're a lot more talented in
16 that arena than I am.

17 Mr. Munich.

18 MR. MUNICH: Thank you, judge.

19 DR. ROBERT MICHAEL COSTRELL,
20 called as a witness herein, having been first duly
21 sworn, was examined and testified as follows:

22 DIRECT EXAMINATION

23 BY MR. MUNICH:

24 Q. Mr. Costrell, can you please tell the court
25 what your current employment is.

1 A. I am Professor of Education Reform and
2 Economics, and I hold the Endowed Chair in Education
3 Accountability in the Department of Education Reform,
4 in the College of Education and Health Professions at
5 the University of Arkansas.

6 Q. And we have your CV here?

7 MR. MUNICH: Your Honor, may I approach?

8 THE COURT: Certainly. You have leave to
9 approach this witness.

10 MR. MUNICH: Thank you, Your Honor.

11 THE COURT: Which exhibit is this?

12 MR. MUNICH: Oh, yes. It's 1340, Your Honor.

13 THE COURT: Thank you.

14 BY MR. MUNICH:

15 Q. And we have it up on the screen, too.

16 A. Oh, okay.

17 MR. MUNICH: If we can zoom in, perhaps.

18 Q. And what is your -- can you tell us a little
19 bit about at your current position, what your areas of
20 focus are.

21 A. In my current position, as I say, it's a
22 Department of Education policy, and I am the Director
23 of the -- actually I'd say the Founding Director of the
24 Graduate Program -- graduate Ph.D. -- Ph.D. program in
25 education policy. It's a new department, new program.

1 We just got underway.

2 So I have my teaching responsibilities that
3 will be getting underway. I'll be teaching school
4 finance to our Ph.D. students. And I have my research
5 activity, which is underway, and various areas of
6 school finance. In particular, I've been working a lot
7 on teacher pension policy the last few years and have
8 also been working on school finance issues. Costing.
9 I've written on costing-out studies. Published on that
10 in the last three years as well.

11 Q. Okay. And why don't you, just briefly,
12 highlight your education for us.

13 A. I received my undergraduate degree in
14 economics from the University of Michigan, and I
15 received my Ph.D. in economics from Harvard University.

16 Q. And you mentioned that you've -- one of your
17 areas of research is school funding and school
18 finance.

19 Did you have any experience in that area
20 prior to your current position?

21 A. Yes. In general, I started applying the
22 tools of economic analysis to education policy in my
23 previous academic position at the University of
24 Massachusetts in Amherst, published in some of the top
25 journals on that. And then I had a -- I had the

1 privilege of serving seven years in the State House
2 of Massachusetts in a -- in a reasonably high policy-
3 making position where my responsibilities were fairly
4 broad but always had a large component that was
5 education policy and, specifically, education finance.

6 I led the reform efforts for three governors
7 in school funding formulas. So I acquired quite a bit
8 of experience on that. And that would be both for
9 district funding formulas as well as charter school
10 funding formulas, which were enacted during my tour of
11 duty there.

12 And I had quite a bit of involvement and
13 contact with those who were at the center of a very
14 vibrant and important period in the history of
15 education reform in Massachusetts, in the period from
16 1999 to 2007.

17 Q. Okay. Thank you.

18 And the exhibit we have up on the screen and
19 the one you're looking at, 1340 -- Respondent's 1340,
20 that is a copy of your CV, is it not?

21 A. It is, yes.

22 Q. On page two under Boards, Panels, Grants,
23 Awards, Dr. Costrell, the second item you have National
24 Technical Advisory Council.

25 Can you explain what that is?

1 A. Yes. Last year Secretary Spellings, U.S.
2 Secretary of Education appointed me to a new council,
3 as it's called, National Technical Advisory Council,
4 which advises the Department of Education on matters
5 relating to NCLB.

6 Such matters, for example, evaluate -- states
7 have to go through an accountability process under
8 NCLB. And, various -- for example, various criteria
9 are applied to the states, such as growth models.

10 So we, as a technical advisory group, give
11 advice to the Department of Education on such matters,
12 and they use that advice in forming their regulatory
13 decisions with regard to implementing the law.

14 Q. Okay. Have you published in the field
15 relating to school funding and school financing?

16 A. Yes, I have. I've published -- well, let's
17 see. I'll leave aside all the papers on teacher
18 pension policy, which obviously are also funding. But
19 more directly pertinent to the issues that we'll be
20 talking about, article on page six with the Eric
21 Hanushek and Susanna Loeb on the use of cost functions,
22 in adequacy determinations, adequacy lawsuits.

23 I wrote a few pieces with regard to the
24 Massachusetts school finance case. You can see that on
25 the fourth from the bottom, the Brookings Institution

1 volume, a refereed chapter in that on the Massachusetts
2 case, with the costing-out methods that were used in
3 that case, and there were a few others as well on that
4 case that would also -- can also be found on -- on this
5 CV.

6 Q. Okay. And have you testified in the past in
7 any school funding matters?

8 A. Yes. I've testified twice. Once in the case
9 of -- in the Hancock case in Massachusetts. I was on
10 the stand for about four days. And the second case was
11 in the State of Missouri.

12 Q. Okay. And did the court accept you as an
13 expert in school funding and school finance matters in
14 both of those lawsuits?

15 A. Yes.

16 MR. MUNICH: Your Honor, at this point we'd
17 offer Exhibit 1340.

18 THE COURT: 1340 is offered.

19 MR. EMCH: No objection, Your Honor.

20 THE COURT: 1340 is admitted.

21 EXHIBIT ADMITTED

22 BY MR. MUNICH:

23 Q. Put that aside -- that binder aside,
24 Dr. Costrell. And there's some water up there for you,
25 too.

1 A. Oh, you have it here, too. Thank you.

2 Q. Now, turning to the matter that brings us all
3 here today, were you asked by the State of Washington
4 at some time to provide some expert services in
5 connection with this litigation?

6 A. I was.

7 Q. Okay. And what topics did you ultimately end
8 up addressing in the course of that work?

9 A. Well, I ended up addressing the general issue
10 of costing-out studies on which I published. I
11 provided analysis of a specific set of cost studies in
12 one specific study that was done with regard to the
13 State of Washington. I also reviewed -- I formed an
14 opinion with regard to the Education Act 2261.

15 Q. Okay. And can you briefly tell us how you
16 went about undertaking your assignment.

17 A. Well, with regard to the general evaluation
18 of costing-out studies, didn't take a lot of
19 preparation because I've written on it, so -- so I -- I
20 reviewed my understand -- my previous research in that
21 area. And then, more specifically, I saw how those
22 issues that I raised in those publications and, more
23 generally, played out in -- in the particular study
24 that was done for the State of Washington -- in the
25 State of Washington.

1 With regard to 2261, I reviewed the bill and
2 came to certain judgments about it.

3 Q. Okay.

4 A. And, in particular, the judgments I came to
5 were formed in juxtaposition, shall we say, with my
6 views on the -- of my professional opinions on the
7 costing-out methodologies and the adequacy project in
8 general.

9 Q. Okay. And before we get into the details of
10 your conclusions and findings, can you just, first as
11 to the issue of cost methodologies -- costing-out
12 methodologies --

13 A. Right.

14 Q. -- tell the court what your overall opinion
15 is.

16 A. Well, my overall opinion with regard to the
17 costing-out methodologies -- and I'll go through
18 several of them -- and the adequacy project, in
19 general, is that it is based on a flawed premise. The
20 premise is that you can define a certain level of
21 performance and that definition can be specific or
22 vague. Okay? And look at the funding and determine a
23 relationship between the two, how much funding would
24 have to increase, if you will, to get to a specified
25 higher level of performance.

1 And that project presumes a systematic
2 relationship between the two that is -- has eluded
3 social scientists for, oh, probably 40-odd years and is
4 not discernable from the data in any scientific
5 fashion.

6 Q. Okay. And what is your overall conclusion as
7 to -- based on your review of House Bill 2261?

8 A. My review of House Bill 2261 is that it
9 operates from -- it does not operate from that
10 premise. It does not start with a presumption that
11 this is what -- where we want to get -- that we want to
12 get to a specified level of performance and this is how
13 much we have to increase the spending to achieve that.
14 Rather, it proceeds in a more deliberative and
15 iterative process by which a variety of working groups
16 and technical committees will come up with successful
17 funding formulas with specified programs.

18 And I would say the key to this bill is the
19 very serious attention to data, and particular with
20 regard to the establishment of the -- Education Data
21 Center is the proximate name, within -- I believe it
22 was within one of the finance entities, to evaluate on
23 an ongoing basis the -- well, first of all, to make
24 sure that the various initiatives are -- will generate
25 data such that the student outcomes can be tied to the

1 specific expenditures as best as they can and to have a
2 follow-up evaluation for cost effectiveness of the
3 various interventions that are enacted on an ongoing
4 basis.

5 Q. As someone who has worked in the field of
6 school funding reform and school finance formulas and
7 legislation, does that strike you as a reasonable
8 approach?

9 A. Yeah, I've seen both ways done. I mean, I've
10 seen in the State of Massachusetts, I've seen a whole
11 large, unspecified expenditure increases that have been
12 enacted with very little evidence with regard to their
13 efficacy, and I've also seen in subsequent phases of
14 the education reform process in Massachusetts the more
15 specific targeted, often piloted programs with
16 evaluation -- were very strong evaluation language
17 written into it that is much more promising.

18 Q. And just to backtrack for a second,
19 Dr. Costrell, your experience in advising legislative
20 bodies and executive branch officials about school
21 funding aren't just limited to -- your experience is
22 not just limited to Massachusetts; is that right?

23 A. That's correct.

24 Q. Where else have you --

25 A. I have been asked to help out in the State of

1 New Hampshire with regard to their funding formulas.
2 Obviously, I was asked to provide expert opinion in the
3 State of Missouri. I have -- in the State of Arkansas,
4 I'm in discussions there as well where I have been
5 called for certain assistance.

6 MR. MUNICH: Your Honor, we had previously
7 marked for use with Dr. Costrell a large exhibit,
8 1339. It's 100 plus pages. We are not going to use
9 all those pages, and so what I've done is, to pare that
10 down, I have a much smaller exhibit that I'd like to
11 have marked. I've given that to the other side. It's
12 just the same pages pulled out of that larger exhibit
13 just for ease of handling.

14 THE COURT: Do you want the substitution or
15 do you --

16 THE CLERK: That would be counsel's
17 preference.

18 Do you just want to substitute it for
19 the old one?

20 MR. MUNICH: That would be fine, Your Honor.

21 THE CLERK: You will not be using the full
22 one?

23 MR. MUNICH: We will not be using the full
24 one.

25 THE COURT: Exhibit 1339 will be substituted.

1 And petitioner's counsel has this?

2 MR. MUNICH: Yes. Yes, Your Honor.

3 THE COURT: All right.

4 BY MR. MUNICH:

5 Q. Let me hand you what we've substituted as
6 1339, Dr. Costrell.

7 These are some of the slides that you've
8 previously put together as part of your work; is that
9 right?

10 A. It is, yes.

11 Q. And this is a -- these are simply slides that
12 were taken from the larger body that had been
13 previously marked as 1339, right?

14 A. Correct.

15 Q. Okay. We'll get into the details of some of
16 those in just a few moments.

17 I'd like you, first, to tell the court on the
18 first part of your assignment, the assessed costing-out
19 on the methodologies, what did you do?

20 A. Well, I provided opinion with regard to the
21 various costing-out -- professional opinion with the
22 costing-out methodologies based on my study of these
23 methodologies, both in the general and other states
24 that I've mentioned, as well as in conjunction with the
25 specific study that was done in the State of

1 Washington.

2 Q. Okay. And what are the costing-out
3 methodologies that are commonly used?

4 A. Well, they're commonly enumerated as four of
5 them. The Professional Judgment Method, the -- and
6 they go by different names. But, the Professional
7 Judgment Method, the Evidence-Based Methods, called
8 Evidence-Based Method, Successful Schools Method, and
9 the Cost Function Methodology.

10 And all of those methods were used or invoked
11 in the study that was done in the State of Washington,
12 so it provided a ready example the these general
13 methods.

14 Q. And that study, was that presented at some
15 place at some point in the process?

16 A. Here in Washington?

17 Q. Yes.

18 A. Yes. The -- I believe it was the -- in a
19 Minority Report to the Basic Education Task Force,
20 there's a report by the, I believe it's called the,
21 Full Funding Coalition that is based on -- explicitly
22 based on this -- what's called the Washington Adequacy
23 Funding Study.

24 Q. And did you study that Washington Adequacy
25 Funding Study?

1 A. I studied the Washington Adequacy Funding
2 Study quite closely.

3 Q. Just briefly, how did you do that?

4 A. Well, the report itself I read carefully,
5 but, more importantly, I requested all the background
6 data and analyses and computer printouts to receive
7 those. And I was sent quite a number of documents and
8 spreadsheets and computer programs, econometric
9 programs.

10 I think the first set of files I received was
11 on the order of about 1,000, about 250 of which were
12 Excel spreadsheets, which I examined in great detail.
13 And then there were subsequent documents provided of
14 the same order of magnitude, including documents that
15 were also provided by the subcontractor for the
16 individual who -- or for the organization that produced
17 the report.

18 Q. And you analyzed all of those.

19 A. I did.

20 Q. Okay.

21 A. In very great detail.

22 Q. Okay. Now, what is the aim of people who
23 advocate the use of cost studies in school funding?
24 What is the purported aim of those individuals? What
25 are they supposed to be used for?

1 A. Well, I -- they are aimed at answering the
2 question, how much additional money do you need or is
3 required to achieve a certain level of performance.
4 And, again, as I stated earlier, which I used the
5 ruburk (phonetic) of the adequacy project to the state
6 level of performance can be defined vaguely or
7 specifically in terms of test score results, pass
8 rates, for example. And that's the aim of these cost
9 studies.

10 Q. Okay. And is it your opinion that these four
11 types of studies that you've mentioned, that they can
12 actually tell us that -- answer that question?

13 A. My professional opinion is that they cannot.

14 Q. Okay. Can you tell us why you have that
15 opinion and use your -- to illustrate your opinion on
16 the work that you did in connection with Washington
17 state.

18 A. Okay. Well, again, the fundamental issue,
19 just to repeat, is that there -- I will see this over
20 and over again in the data for the State of Washington
21 that was used in this particular study, the fundamental
22 problem is that there is no systematic relationship
23 between the inputs and the dollar expenditures and the
24 outputs or performance levels that are purported to be
25 achieved by those higher levels of expenditures.

1 And this plays out in -- pretty much in each
2 of the four general categories of the costing-out
3 studies.

4 Q. Okay. Why don't you walk us through those
5 four studies --

6 A. Okay.

7 Q. -- and your opinions and conclusions about
8 each of them.

9 A. Okay. All right. So the first one that I
10 mentioned before, commonly called the Professional
11 Judgment Method, which I've prepared a slide number 11
12 here. It is -- first, just to describe the method,
13 essentially the method is based on pulling together a
14 number of panelists who will provide opinions with
15 regard to interventions and resources. They basically
16 ask the question what resources would you need -- these
17 would typically be educators of one sort or another.
18 What -- what resources would you need to achieve a
19 certain level of performance. And, again, the level of
20 performance that's indicated to them may be general, it
21 may be vague. It's generally viewed as an unscientific
22 method. It's not based on data of expenditures and of
23 performance.

24 As I've indicated on this slide -- well, I'll
25 get to what that individual says -- or just give you my

1 opinion of its difficulties, its problems. It's not
2 based on data. It's based on a survey of opinions.
3 And, moreover, the opinions, for a variety of reasons,
4 are typically solicited in a way that generates what
5 has come to be known as a wish list. Okay?

6 For example, they're not confronted with a
7 budget constraint. So there's no -- there's typically
8 little or no emphasis on cost effectiveness. And so,
9 as a result, you do typically end up with what has been
10 called a wish list. And, in particular, that phrase
11 was used by the judge in the case in Massachusetts when
12 presented with such a study when she chose to disregard
13 that study in that case for -- in rendering her
14 opinion.

15 I cited on this particular slide the views of
16 one of the founders, one -- an individual who's
17 generally credited as one of the founders of the
18 method. His name is James Guthrie. He's a very
19 distinguished professor of -- at Vanderbilt, the
20 Peabody College, much honored individual, just received
21 a lifetime award from the American Education Finance
22 Association, who, after a period of years, has come to
23 the view that the method that, again, was, in part,
24 associated with his name is fatally flawed. And I've
25 given some quotations here from him with regard -- that

1 are drawn from the evaluation that he provided to the
2 individuals that the organization that created the
3 Washington Adequacy Funding Study.

4 He has come to believe that the technique
5 suffers from incurable deficiencies, that it is
6 essentially a collection of educators, merely proven
7 prejudice in his view. So it's a florid way of stating
8 what I just stated, which is that it's a collection of
9 opinions not based on data and it's not scientifically
10 valid.

11 Q. And the comments that you have restated here,
12 especially on the last two bullet points from
13 Dr. Guthrie, these were, in particular, directed at the
14 same Washington study that you reviewed; is that right?

15 A. Correct.

16 Q. And that was part -- as part of a peer review
17 process as well?

18 A. Yes. It was a peer review process. The
19 Washington Adequacy Funding Study was sent out to four
20 or five individuals to review.

21 Q. Okay. So, if you could continue, then --
22 let's turn to the next slide, Dr. Costrell, and
23 continue with your conclusions about the Professional
24 Judgment approach.

25 A. Okay. I'm not going to go through this whole

1 slide here, but just to illustrate -- and some of this
2 is actually more relevant, perhaps --

3 Q. This is slide 15?

4 A. Correct -- to perhaps the next method, which
5 was used in conjunction with this in the case of the
6 WAF, but just to illustrate, for example, the wish list
7 nature that one often engages -- that one often ends up
8 with an exercise of this sort.

9 I drew a few of the comments that were made
10 by the panelists in the Washington Adequacy Funding
11 Study towards the bottom. They were presented with a
12 list of potential interventions, which ones, you know,
13 would you like, which ones would you recommend. And
14 you get comments like, this would be really sweet, this
15 would be a luxury, but -- and this type of thing.

16 And so, not surprisingly, all the
17 interventions get chosen.

18 Q. Okay. And these were comments from the
19 actual people who's professional judgment was being
20 sought, is that it?

21 A. Correct.

22 Q. Okay. So the -- I think you said the next
23 approach then was the Evidence-Based Approach; is that
24 correct?

25 A. Yes. The Evidence-Based Approach -- I don't

1 have a slide on that one, well, except, perhaps,
2 certain elements of this slide.

3 Well, what the Evidence-Based Approach does
4 is say, okay, instead of gathering together a bunch of
5 individuals, let's sit down -- and whoever the
6 contractors are, whoever's doing the study -- and
7 review the literature on a variety of interventions.
8 Pick out the ones that we think would -- are, quote,
9 supported by the research and string them together in a
10 fashion that will produce -- that we believe will
11 produce the required results and then assign costs to
12 those interventions.

13 Q. Okay. What's your opinion about that
14 approach?

15 A. My opinion about that approach,
16 unfortunately, is that the research that is surveyed in
17 that is of highly -- highly variable quality, and the
18 bar, for what is considered acceptable, is set
19 extremely low. Okay?

20 The sad fact is that the vast majority of
21 educational research is -- is not very strong. And
22 this is becoming a huge problem that has been
23 recognized at the highest levels of our national
24 educational establishment, particularly the U.S.
25 Department of Education, starting, oh, back five or

1 six, seven years ago, tried to -- knew this was a
2 problem and said we need to establish scientific
3 standards in education research. And so they actually
4 set up what's called the Institute for Education
5 Science in the Department of Education.

6 I believe you had Professor Eric Hanushek
7 here who is on the board of that. This was set up. It
8 was under Russ Whitehurst, Grover Whitehurst and they
9 established various criteria for the quality of
10 research to be persuasive.

11 In particular, they put a great deal of
12 stress on what they call the Gold Standard, which is
13 randomized control trials. It's the highest category
14 of research. And two particular programs within the
15 Department of Education evaluate research from that
16 standpoint. One is called the What Works
17 Clearinghouse, which goes out and reads existing
18 research and sees how many studies meet this standard
19 and then see what they say on one subject or another,
20 and the other one is actually commissioned by the
21 Department of Education through what's called the NCEE
22 to -- they have commissioned, to date, I believe about
23 11 such studies that have been completed. That is,
24 they've commissioned more, but the ones that have been
25 completed, the last I looked, was about 11 that met

1 that standard. So they contracted for them and get the
2 results.

3 So, if we take the latter, for example, if
4 that was 11 studies -- I can't give you the exact
5 numbers. But, unfortunately, what's coming up with is
6 most of them are coming up empty. They're coming up
7 not with, quote, no discernable effect for the various
8 interventions that are examined.

9 Now, some of the interventions that they're
10 examining are sort of specific, you know, products, you
11 know, a particular reading curricular or something like
12 that. And some of them are a little more general.

13 So, for example, two that come to mind are a
14 study that they commissioned, and I believe the results
15 were released this year or quite recently, with regard
16 to professional development. Okay? A couple different
17 kinds of professional development, I believe was with
18 and without coaches, in the area of early literacy.
19 And the results, again, through randomized control
20 trial, which means individuals are randomly assigned to
21 having the treatment versus not. It's an attempt to
22 mimic the medical research methodology. And the
23 results came up with no discernable effect, okay, for
24 this -- for this Gold Standard Study. The only one I
25 believe that's out there -- or that I'm aware of.

1 Certainly the only one that they commissioned -- the
2 federal government commissioned on the professional
3 development.

4 Another one was a study of, I believe it was,
5 on teacher induction. I believe it was elementary --
6 at the elementary level, comprehensive elementary
7 teacher induction. And, again, the results came up
8 with no discernable effect.

9 Now, there are a few studies that they found
10 that did come up with effect, but I don't believe they
11 apply in this case. For example, one of these studies,
12 which was done by a colleague of mine at the University
13 of Arkansas under contract with the federal government,
14 which is the analysis of the -- of the -- in fact, it's
15 been much in the news, which is the DC Choice Project.
16 The DC Choice Experiment has been very politically
17 prominent because the Legislature -- Congress decided
18 to eliminate the program before they got the results,
19 and then the Senate held a hearing and said, well --
20 actually, when the results came out, what was the
21 hearing -- what was the results and Senator Lieberman
22 chaired the committee and had my colleague -- forgive
23 me for bragging about my colleague.

24 But, anyway. So that was -- so they don't
25 all come out negative is my point here. They don't all

1 come out with no discernable effect. But a lot of them
2 did, and this is a matter of concern to the research
3 community. Well, concern but also, you know --

4 In fact, there was a recent article on
5 education talking about all this, and one prominent
6 researcher, whose name escapes me at the moment, said,
7 well, we're spending a lot of money on these things.
8 It's probably valuable to know what -- whether the
9 research says that they, you know -- that they have the
10 effects that are being claimed for them.

11 Q. Okay. And so these issues that you've just
12 discussed about the quality in the state of research,
13 these are factors that lead you to conclude -- to have
14 some doubt about the Evidence-Based Approach.

15 A. Yes. So, for example, in the Washington
16 Adequacy Funding, which also uses the Evidence-Based
17 Approach, basically, they used it in conjunction with
18 the Professional Judgment Study to come up with the set
19 of interventions that the contractor determined was,
20 quote, supported by the research, presented it to the
21 panelists and said to them, this is all supported by
22 the research, which ones do you want. Well, naturally,
23 they chose them all.

24 So -- but, again, the statement of what's
25 supported by the research turned out to be, I think,

1 fairly expansive, shall we say.

2 So to give one example, it was claimed that
3 the Career Academy, which is essentially a program that
4 results in lower class sizes at the high school level,
5 was presented in this aspect of the study as -- as
6 research shows, quote unquote, that this will increase
7 the graduation rate.

8 Well, if you go to the other program --
9 federal program that I mentioned, the other U.S.
10 Department of Education Institute for Education
11 Sciences Program, which is the What Works Clearinghouse
12 that goes out and reviews the research in one area or
13 another, this was one area that did tie up with the
14 interventions that I saw mentioned in this evidence-
15 based study, and it was precisely on career academies.
16 And it turned out there was exactly one study that met
17 the Gold Standard, or the What Works Clearinghouse put
18 forth, and it found no discernable effect on high
19 school completion rates.

20 So, there's a tendency to, as I say, set a
21 lower bar on the studies in these research -- and these
22 allegedly evidence-based cost studies.

23 Q. Okay. Let's turn to page and talk about --

24 A. Again, that's another -- sorry to interrupt.

25 Q. Go ahead.

1 A. It, again, comes back to the general
2 underlying problem, which is the great difficulty in
3 establishing a systematic relationship between the
4 inputs and the outputs or performance levels that
5 they're purported to meet, which we're just simply not
6 at that level of scientific knowledge.

7 Q. Okay. And before we move on, Dr. Costrell,
8 you talked about -- the first thing you talked about
9 was Professional Judgment. You mentioned sort of,
10 generically, who these panels were.

11 Were these Washington state-based educators
12 that sat on the panel?

13 A. I believe so.

14 Q. Superintendents, other educators, CFOs,
15 people like that?

16 A. I believe so.

17 Q. Okay. Let's move to the next of the four,
18 which is called Successful Schools; is that right?

19 A. Correct.

20 Q. Okay.

21 A. It goes by a few names.

22 Q. Why don't you explain that to us and then
23 let's talk about your conclusions.

24 A. Okay. Successful Schools or sometimes called
25 Successful Districts in the present case was what's

1 called Improving Schools Methodology. Says, okay,
2 let's have a look at some data on student performance
3 and expenditures, and let's find schools -- let's
4 categorize schools or districts -- sometimes it's one,
5 sometimes it's the other -- into two categories. One
6 that for schools, let's use the word schools here, that
7 seems to be doing something right by measures of
8 performance -- and we can get back to the particular
9 measures of performance in more detail -- and see how
10 much they're spending.

11 And there we, at least, have a data-based
12 method for seeing what schools have accomplished in the
13 here and now with specified levels of -- with various
14 levels -- with -- and the resources they're expending
15 on them.

16 Q. Okay. Is the theory that we look at schools
17 that are performing at a higher level and see what
18 they're spending within the assumptions that if could
19 do it --

20 A. Okay. So can --

21 (Interruption by the court reporter.)

22 THE COURT: Let's make sure we follow the --

23 THE WITNESS: Okay.

24 THE COURT: -- question and answer format for
25 the sake of the court reporter.

1 THE COURT REPORTER: I need the end of your
2 question.

3 MR. MUNICH: Sure. Let say again.

4 BY MR. MUNICH:

5 Q. Was the assumption then behind that theory,
6 Dr. Costrell, that if we have a selection of schools
7 that are performing at a relatively high level at a
8 certain level of spending that other schools can also
9 meet that high level and that level of funding, is that
10 --

11 A. Yes.

12 Q. -- (indiscernable)?

13 A. Yes. And sometimes that is valid, and I
14 would say is valid and sometimes it is not. It
15 depends, for example, on what else is going on in the
16 schools.

17 So this gets to the first issue that you have
18 to be careful about. And that's the criterion for
19 classifying schools as successful. Okay? What you
20 really want to get at is some indication that -- of
21 what the schools are doing. And, in particular, you
22 want to disentangle that from the demographics of the
23 kids in the schools to the extent possible. Okay?

24 So, for example, if, you know -- if your
25 socioeconomically privileged schools are performing at

1 a very high level, you say, well, this is how much they
2 spend and this is what -- therefore, what you need to
3 get at this high level, you know, you're not
4 necessarily getting at what the school is doing as
5 opposed to what the students are bringing to the
6 school.

7 So, for that reason, I have opined -- written
8 that a preferable method of doing this is to get at
9 some measure of -- ideally, of value added of the
10 school, the value the school is adding to the student's
11 performance, which takes into account the prior
12 performance level of the students, how much they're
13 actually learning. It can take into account
14 demographics. It can take into account that recruiter
15 level, the -- simply the improvement in the schools --
16 in the school's performance -- of student performance
17 in the schools.

18 And so -- so, actually, in the Washington
19 Adequacy Funding Study, they -- the part of that that
20 is based on the Successful Schools, they actually call
21 it Improving Schools, so they pay, actually, a great
22 deal of attention to that criterion. In fact, they
23 established several criterion that I thought, in
24 general terms, were fairly-well chosen to focus on
25 improvement, but also to have, at least, above-average

1 level of performance.

2 It was also criterion used on selecting the
3 Improving Schools was that they be representative of
4 the full array of free and reduced lunch percentiles
5 from all 10 deciles, pick the top five schools and have
6 a look at them more closely, and also AYP, the federal
7 AYP criterion.

8 So they had several criteria like that which
9 focused on improvement and not simply trying to select
10 for being privileged demographics.

11 So they come up with a set of schools at the
12 elementary, middle, and high school level that were
13 successful by that criterion as opposed to the other
14 schools in the state.

15 Q. Now, you mentioned that that criteria for
16 selecting schools is one issue.

17 What -- are there other issues
18 that (indiscernable) --

19 A. Yeah. Another issue is, typically it's going
20 to --

21 (Interruption by the court reporter.)

22 Q. No. Make sure I finish before you answer.
23 So the court reporter can keep up with us.

24 A. Could you repeat the question?

25 Q. Yes. Are there other issues relating to

1 Successful Schools besides the question of how you
2 chose which schools are successful.

3 A. Right. The other issue is the -- that arises
4 because of the underlying phenomenon that ties to a lot
5 of what I've been saying, is that you're going to have
6 a very wide variance in the level of spending,
7 typically, even within the set of Successful Schools.
8 Okay? And as we'll see in a minute, it's often highly
9 overlapping with the range of expenditures in the
10 schools that are not classified as successful, which
11 gets to the general theme I've been reiterating, which
12 is that there does not seem to be any systematic
13 relationship that can be discerned between the spending
14 on the one hand and the performance on the other.

15 Successful Schools often do not spend any
16 more on average or -- than the nonsuccessfull -- than
17 those that are not so classified. Moreover, again,
18 there's a very wide range within both of these
19 categories.

20 So if we stick, for example, to the
21 Successful Schools category, we have a very wide
22 range. Where do you set the level that you're going to
23 specify as what is, quote, required for reproducing
24 that level of performance? Okay?

25 To use the average, which is often what is

1 used, is, in my view, highly misleading. It really
2 leads to what -- what you might call the Lake Wobegon
3 phenomenon, which is that, okay, if we're going to set
4 the average as the minimum, then what, you know --
5 then, okay, you're going to obviously range the
6 average. You're still going to have a number that are
7 below the average.

8 In other words, you'll end up with the
9 logical conundrum that you're going to declare half of
10 your schools -- half of your Successful Schools -- that
11 you're going to declare half of your Successful Schools
12 don't have enough money to be successful by that
13 criteria, so you end up with this kind of logical Lake
14 Wobegon type of problem, if you use the average. Which
15 is why I've opined that you would be better off
16 using -- if you're looking for, you know, a floor, in
17 other words what is required as a minimum, using
18 something below the average, and I've given a few
19 possible suggestions that -- in that regard.

20 But what that also gets to is the general
21 province that you have this wide dispersion of
22 expenditures associated with success. What's going on
23 here? What else is going on here? Are there
24 efficiency differences that you need to pay attention
25 to? Are there nonmonetary factors, which appear to be

1 very important, in explaining success?

2 So that's -- so I think the Successful
3 Schools Method with the kinds of caveats and
4 refinements, that I've mentioned in here and have
5 written about, can be used to develop a rational
6 funding level, but it's not to be confused with a
7 funding level that will reach, you know, a higher -- a
8 certain specified level of result. The problem is when
9 you try to extrapolate from that to higher levels of
10 performance without the data to support that.

11 Q. Okay. Did you prepare some charts
12 particularly based on the Washington data and the
13 Successful Schools portion of the --

14 A. I did.

15 Q. -- WAF Study?

16 A. I did.

17 Q. Okay. Let's turn to that chart that's page
18 numbered 10 of Exhibit 1339. Slide number 10.

19 A. Right.

20 Q. It's the third slide in. Why don't you
21 explain this to us.

22 A. Okay. So this slide is drawn from the data
23 that was provided by the state or drawn from state
24 sources for the use in the Washington Adequacy Funding
25 Study. And, again, the Washington Adequacy Funding

1 Studies criteria with regard to classifying schools as
2 those that are -- or actually the term that was used in
3 the spreadsheets was exemplars. These are the
4 improving schools --

5 Q. Okay.

6 A. -- by the criteria that we discussed
7 earlier.

8 Now, these dollar amounts, just so you
9 don't -- just to explain why they're relatively low,
10 are school-based personnel expenditures. So they don't
11 include nonpersonnel expenditures, and they don't
12 include, I believe, district-based personnel.

13 So that's why they're of this magnitude here
14 around \$3,000 or so, and this is for the year 2005. So
15 if we get to the -- if we cut to the bottom line here,
16 the average level of personnel expenditures per
17 pupil -- and I use average in the sense of mean for
18 the first -- in the first instance. It's \$3,249, which
19 is, essentially, no different. It's actually a tad
20 less but, basically, no different between the other
21 schools.

22 Now, I have two categories of other schools
23 there. One is all others that were found in these
24 files, and that's the 3,373 figure. The middle one
25 is to make sure that there's not a spurious omitted

1 variable here, such as -- in other words, attempting to
2 match amongst these broad number of other schools to
3 make sure they're of the comparable size to the
4 exemplar schools, comparable grade structure and the
5 like. So -- and it turns out it's pretty much the same
6 number 3,269 as opposed to 3,373.

7 So, again, if we compare the mean for these
8 personnel expenditures per pupil, the exemplar schools
9 do not spend more than the other schools on the
10 average.

11 And the second set of columns, which is on
12 the medians as opposed to the means, in other words
13 half above and half below, it's actually about 10 or
14 \$11 -- no, what, \$3 or \$11 more. It's the same number.

15 Q. Right.

16 A. So, again, they don't spend materially more
17 than the other schools.

18 Q. Okay. And just to be clear, these are based
19 on, as you say, 2005 Washington state data that were
20 relied on by the WAF Study that were then provided to
21 you; is that right?

22 A. Correct.

23 Q. Okay. Can you tell us about the next slide
24 in the packet, which is slide number 11?

25 A. 101?

1 Q. I'm sorry, excuse me. 101.

2 A. Okay. Well, 101 and 102 and 103 are
3 presenting the same data that we saw in slide 10, but
4 instead of just looking at the mean or median, it's
5 looking at the whole distribution. And --

6 Q. So this is for elementary school; is that
7 right?

8 A. Yeah. I'm just making sure I'm looking at
9 the right picture here. Hang on just a second. Yeah.
10 Okay. Good.

11 Yeah, so on the horizontal axis you have
12 these personnel-per-pupil expenditure figures ranging
13 from, you know, the \$2,500 range on up to the \$5,000
14 range, so, in other words, double. And you'll see that
15 there are a few up in the 4 or \$5,000 range, not very
16 many.

17 The vertical axis, sorry, is the frequency,
18 the percent of the total number of schools in these two
19 categories.

20 So the red diagram is the frequency
21 distribution -- let me first take -- yeah, the red
22 diagram is the frequency distribution. In other words,
23 like the Bell Curve, if you will, of the exemplar
24 schools. The expenditures in the -- per-pupil
25 expenditures in the exemplar schools.

1 So, for example, you see a spike at the
2 \$2,900 level. About 14 percent of these schools are
3 spending about \$2,900 and then a few other spikes at
4 3,200, 3,300, 3,600. So there's a fairly wide range --
5 no, I would say the bulk of the observations here lie
6 between probably 2,700 and 3,700 with a few outliers at
7 the high level and a few outliers at the lower level.

8 Similar -- and one reason, by the way, that
9 it's herky-jerky like this is you're not dealing with
10 large numbers of these schools.

11 The black diagram there is the frequency
12 distribution of the other schools. It's a lot smoother
13 because there's larger numbers.

14 But, as you can see, again, there's a wide
15 range there between, again, probably about \$2,600 and
16 \$4,100. And it pretty much overlaps. So there's a
17 wide range and there's a wide overlap between the
18 expenditure patterns of the exemplar schools and the
19 other schools. And, again, when I say the other
20 schools here, this actually corresponds to the middle
21 column of the previous table, the ones that are chosen
22 to match the exemplar schools for size and grade
23 structure and the like.

24 Q. And then you have two more succeeding slides,
25 102 and 103. Are they just the same analysis for

1 middle and high schoolers?

2 A. They were. And the same punch line comes out
3 of them, which is the wide range of expenditures and
4 wide overlap with the non-exemplar schools.

5 Q. Okay. Did you also look at another -- in
6 addition to expenditures, another resource input?

7 A. I did. I looked at student/teacher ratio.
8 And, actually, some of this is actually reported in the
9 study itself. But I went into the spreadsheets myself
10 to verify them and to get more detail on them.

11 So, the student/teacher ratios for the three-
12 year period, 2003 to 2005, again, drawn from the
13 underlying files of the Washington Adequacy Funding,
14 are summarized here.

15 The structure of this table is the same as
16 the previous table. So we see, for example, that the
17 exemplar schools have a mean student/teacher ratio of
18 16.7. The others have 16.8, 16.9, depending on whether
19 we restrict them with those of -- that are of matching
20 characteristics. On the median, it's 17.1 for the
21 exemplars, which is actually a little higher than the
22 ones for the others. But there's essentially no
23 difference between the exemplars and the other schools
24 in terms of student/teacher ratio.

25 Q. Okay. And then you prepared, I guess, some

1 similar slides on what we just saw for expenditures
2 with regard --

3 A. Right.

4 Q. -- to the student/teacher

5 A. So --

6 Q. -- ratios?

7 A. Yes. So slides 22 -- 20, 22, and 24, again,
8 present the distribution of the student/teacher
9 ratios. That's the numbers along the horizontal axis.
10 And, again, the frequency distribution -- so here you
11 really see it's a Bell Curve for this particular
12 variable and they -- on the elementary schools, on
13 slide number 20. And they -- again, a very wide range
14 ranging from -- well, I don't know, 12 up to 20 on
15 student/teacher ratios in the elementary schools and
16 almost perfect overlap with the non-exemplar schools.

17 Q. Okay.

18 A. Similarly on the middle schools and high
19 schools.

20 Q. 22 and 24 are similar results --

21 A. Yes.

22 Q. -- for middle and high schools again?

23 A. Right.

24 Q. Okay. So what -- after reviewing the
25 Successful Schools data that had been put together by

1 the WAF Study for Washington, what did you conclude
2 about the exemplar schools versus the remaining
3 schools?

4 A. Did you want to ask me about slide 30?

5 Q. Oh. Did I miss that? Apparently I did.
6 Yes. Go ahead.

7 A. So slide 30 is the same -- same type of
8 analysis. And this is for classified FTEs as opposed
9 to teachers.

10 So, again, this -- the data for the student-
11 per-classified FTEs in the exemplar schools and in the
12 non-exemplar schools. And, again, what one sees is, if
13 we go to the bottom line there, the mean's 51.0 for the
14 exemplars versus 50.4, 50.8. And similarly on the
15 medians 48.4 versus 46.

16 So, again, it's actually a tad higher, but I
17 would say basically no difference between the
18 student/teacher -- student -- classified FTE ratios in
19 exemplar schools versus the other schools.

20 Q. Okay. And so what was your overall
21 conclusion then based on this Successful Schools data
22 that was compiled by the WAF report?

23 A. So, my conclusion based on that was that
24 using the criteria that was established by the WAF
25 Study, which seemed, again, in general, to be quite

1 reasonable, I didn't get into the details of it. But
2 the -- in general, they seemed to be quite reasonable.

3 That the -- to pick out schools that seemed
4 to be doing something right, they did not seem to be
5 spending any more or to use any more personnel -- or to
6 use any more personnel resources than the other
7 schools.

8 So, again, one finds in the data here the
9 same thing that is found over and over again for 40-odd
10 years with social science research, which there does
11 not seem to be a systematic relationship between the
12 resource inputs, dollars, and physical resources, and
13 the performance levels of the schools.

14 Q. Okay.

15 A. So it would be very hard to extrapolate from
16 that to a higher level of performance with a
17 specification that this is how much you need to
18 increase expenditures.

19 Q. Okay. Let's turn to the last of the four
20 methodologies that you mentioned earlier.

21 That is the Cost Function Study?

22 A. Correct.

23 Q. Okay. Can you -- and you have a slide sort
24 of explaining what that is, slide 78.

25 Can you just tell the court what is a Cost

1 Function Study, first of all?

2 A. Right. Well, the Cost Function Study -- the
3 cost function analysis, in some ways, can be viewed as
4 a more sophisticated extension, if you will, of the
5 Successful Schools Methodology in that it examines data
6 of existing schools on performance levels and on
7 expenditures.

8 What's more sophisticated about it is that it
9 uses a statistical technique or regression analysis to
10 try and control for variables, such as demographics and
11 the like, in the equation that I -- schematic equation
12 that I put up here. I identify teachers of students as
13 a variable that it would have on the explanatory
14 equation. Okay? So, percent free and reduced lunch,
15 that kind of thing. It will have, perhaps, variables
16 about the schools such as the size of the school or the
17 size of the district.

18 But, most importantly, it has in there the
19 variable for outcomes. Okay? So the presumed
20 relationship here that underlies the cost function is
21 the critical relationship -- is the relationship
22 between the outcomes. In other words, the performance
23 and the spending per pupil, okay?

24 So, that's the key relationship here.
25 There's a lot of issues that arise with this, which is

1 why it's so controversial. But the fundamental
2 problem, as we'll see, is that the relationship, once
3 again, between the outcomes and the spending turns out
4 to be quite tenuous.

5 Q. Okay. And the WAF Study that you reviewed
6 also utilized this methodology, correct, cost function?

7 A. It did, yes.

8 Q. Okay. Let's turn to the next slide there,
9 and slide number 81.

10 If you could tell us what this is, how it
11 fits into your conclusion.

12 A. Okay. So this is a graphical representation
13 both of the data and of the estimated relationship
14 between spending and performance. Okay? So in the
15 horizontal axis we have the measure of performance, the
16 variable that was drawn. A variable that's called --
17 in the files that were used by the WAF Study is called
18 the Met Standard. It's the sum of four pass rates. So
19 that's why it's a number between zero and four. So if
20 you had 100 percent pass rate on each of these four
21 exams, you'd have 4.0. If you had 50 percent pass rate
22 on each of the four exams, you'd have a 2.0.

23 Q. That's the horizontal axis?

24 A. That's on the horizontal axis.

25 And the vertical axis is the personnel

1 dollars per pupil. It's actually the number we were
2 looking at before because that was drawn from these
3 data files of the personnel expenditures per pupil.
4 And, again, that's why they were in the \$3,000 range,
5 plus or minus.

6 So, what you have here, first of all, just to
7 look at the dots, is this relationship between the
8 expenditures and -- between the -- well, you have this
9 scattergram of the performance levels versus the
10 expenditure levels.

11 And -- and, by the way, these diagrams do
12 control for all the other -- they statistically control
13 for all the other variables that I mentioned on the
14 previous slide. To represent it in a two-dimensional
15 diagram, I have to reduce it to two variables, the two
16 variables of interest. But all of the other variables,
17 such as free and reduced lunch and size of the school,
18 size of the district, so on, so forth, are all
19 statistically controlled for using the Regression
20 Methodology.

21 So that's -- this is focusing on the
22 variation and outcomes and the variation in
23 expenditures controlling for all these other variables.

24 Q. Based on that same 2005 Washington data?

25 A. Correct. And using the precise -- using the

1 actual regression equation that was produced in the WAF
2 Report.

3 Q. Okay. This is not your regression.

4 A. This is not my regression. I reproduced the
5 regression --

6 Q. Right.

7 A. -- to check it.

8 Q. Okay.

9 A. But it is not my regression.

10 Q. Okay.

11 A. Okay? So what you see is this broad, often
12 referred to as a cloud of dots here, which suggested --
13 which already suggests there's very little
14 relationship.

15 And I want to emphasize here, if I may, these
16 are not just, you know, disembodied statistical dots.
17 There's actually real stuff going on here that's
18 important, I think, to be aware of. And there's two
19 ways of looking at it. They're both equally
20 informative.

21 One is, that if you look to a different --
22 take a given performance level, like 2.0, okay, you see
23 there's a huge vertical spread. Some people -- some
24 schools are achieving that result at, say, \$2,000 and
25 some are achieving them at \$4,000 or \$5,000. So

1 there's a huge spread of expenditures associated with
2 any given performance level, so this raises the whole
3 issue of efficiency, or, you know, there's some other
4 variable that we haven't got in there. Efficiency is
5 certainly, one that has received a lot of attention,
6 and that's the whole basis of the controversy with
7 regard to cost functions, which is how well they
8 control for efficiency.

9 The other way which is, I think, equally if
10 not more pertinent here to those of us who are
11 concerned with education performance, is the horizontal
12 spread. Okay? So take a look at what -- you know, the
13 widespread of performance you get for, let's say,
14 \$3,000. You know, the bulk of the dots lie between 1.0
15 and 3.5. That's -- so that corresponds to pass rates
16 of, you know, 25 percent up to 75 percent, something
17 like that, or 80 percent.

18 So you're getting huge variations in
19 performance for the same expenditure level. What is
20 going on? And we really need to know what's going on
21 in those high-performing schools that are not spending
22 any more than those in the low-performing schools.

23 And this comes up over and over and over
24 again and, in my professional opinion, which I'd be
25 happy to elaborate on, based on, for example, my

1 experience in Massachusetts going into some of these
2 schools, having a look at them, it's a lot of
3 nonmonetary-related factors that are going on, issues
4 of leadership, issues of use of data, issues of what --
5 those are a couple examples.

6 A lot of intangible things that don't cost
7 money, that's why they're able to produce these better
8 results for the same money that really are -- that are
9 hugely important here, far more important than the
10 variations in expenditures as that diagram shows.

11 Q. Okay. Slide eight?

12 A. Now, the line on that diagram is the
13 regression line.

14 Q. I'm sorry?

15 A. The line on that diagram, before we leave
16 it --

17 Q. Yes.

18 A. -- is the regression line. It's the
19 estimated-cost function.

20 Q. Right.

21 A. And as I've indicated there, the variation in
22 outcomes of performance accounts for, like, half a
23 percent, or .4 percent of the variation in the -- in
24 the expenditures. So that's the estimated relationship
25 there.

1 And you'll notice that it's a very flat
2 line. It's almost horizontal, and this is a
3 by-product. This is a statistical -- necessary
4 statistical result of the fact that you have this cloud
5 here. If there is a cloud -- if there is literally no
6 relationship, you'll have a perfectly flat line,
7 always. Okay? That's just the nature of the
8 statistical exercise that comes out of this. And this
9 is pretty close to flat.

10 Q. Okay. The next slide in that packet,
11 Mr. Costrell, is number 82, Cost Function Estimate of
12 Raising Scores.

13 Can you explain this one to us?

14 A. Yeah. Well, this reproduces exactly the
15 prior diagram. This says how does this cost function
16 used in a costing-out study, because there's been
17 dozens of costing-out studies that, based on these cost
18 functions -- they've been used in other court cases,
19 indeed by the same researcher who produced this one --
20 and what you do in using such a cost function almost
21 always, the reason you estimate it, is to try and
22 figure out how much do you have to increase
23 expenditures to get a particular increase in
24 performance.

25 Well, if the curve is very flat, as it is

1 here, you don't -- what it's telling you is you don't
2 have to increase it much at all. Okay? So in this
3 example to increase it from 2.0 on the line to 4.0 on
4 the line, because the line is so flat, the vertical
5 displacement, additional cost is very low.

6 And you can calculate it precisely from the
7 coefficient there. The coefficient there, which I've
8 reproduced on the diagram, says \$76.67. Unfortunately,
9 again, the printout here is not quite as clear as it
10 should be. It says there dollars and it looks like a
11 minus sign, 76.67, it really -- in the -- I can assure
12 you in the underlying PowerPoint, it is an equal sign,
13 not a minus sign.

14 Q. Okay.

15 A. So it should say dollars, which means the
16 per-pupil expenditures, equals 76.67 times the test
17 scores plus a constant.

18 So that means if you want to increase the
19 test scores, say, from 2.0, which is, say, 50 percent
20 pass rate, to 4.0, which is 100 percent pass rate, what
21 this equation tells you, if you take it literally,
22 which is why they're usually produced, you would have
23 to increase the expenditures by two times 76.67 or
24 \$154.

25 So that's an artifact of the fundamental,

1 on-line problem, which is that you have no systematic
2 relationship that's discernable from the data between
3 the expenditures and the outcomes.

4 And the result, taking this cost function and
5 using it as it's typically used in court cases
6 elsewhere and in published studies, says you have to
7 raise expenditures by \$154 to double performance?

8 Q. Is that the conclusion you draw from --

9 A. No.

10 Q. -- that data?

11 A. No, it's not.

12 Q. Why not?

13 A. Again, my -- the -- my professional opinion,
14 which I'm reiterating for probably the tenth time, is
15 that there is no systematic relationship, and that's
16 why you have this fundamental cloud diagram. And if
17 you apply the statistical technique to this set of data
18 that doesn't have a relationship, or at least not a
19 strong one, you're going to get this kind of
20 nonsensical result. So --

21 Q. And then --

22 A. It's an artifact of the real point, which is
23 that there's no systematic relationship between the
24 spending of the performance that can be discerned from
25 the data. That's the fundamental problem with all of

1 these costing-out methodologies, but you can see it
2 really strikingly in the case of the cost functions.

3 Q. Okay. So you've talked to us -- you've
4 talked to us and walked us through all four of the
5 methodologies. And I think you've got a summary slide,
6 slide number 96, that wraps it up.

7 What's your wrap up on all of these four
8 methodologies, what they tell us about school funding?

9 A. Okay. So, I've illustrated these four
10 methodologies -- the problems with these four
11 methodologies using the Washington Adequacy Funding
12 Study. There's a whole set of other issues with that
13 study, which I won't get into. But they're specific to
14 that study.

15 But the general problem lies in these
16 methodologies themselves as, for example Professor
17 Guthrie said in his evaluation of that study with
18 regard specifically to the Professional Judgment aspect
19 of it.

20 But, again, the fundamental problem that
21 arises in all of these approaches is that the question
22 that's being asked is simply one that cannot be
23 meaningfully answered, which is to say, how much do you
24 have to increase the spending to get a particular
25 higher level of performance. It's simply asking too

1 much of the data, simply asking too much of our state
2 of knowledge because we cannot, after 40 years, still
3 find a strong systematic relationship between the
4 spending with performance, which is the question that's
5 being asked.

6 So with the current state of knowledge, I
7 think, we can't answer that question and we really
8 should take the more modest approach to these sort of
9 issues.

10 Q. Okay. Now, the second thing you said you
11 looked at, Dr. Costrell, was you reviewed House Bill
12 2261; is that right?

13 A. I did, yes.

14 Q. Let me hand you what's been marked in
15 evidence as -- well, I'll hand you an exhibit and ask
16 you -- or binder and ask you to turn to what's been
17 marked in evidence as Exhibit 239.

18 A. Uh-huh, yes, I see it.

19 Q. And that's the bill you reviewed?

20 A. That is. I'm just making sure the
21 pagination -- yes, 67 pages, yeah.

22 Q. Okay. And tell us -- share with the court
23 what your conclusions are about 2269, what your
24 findings and conclusions are.

25 A. Well, 2261 --

1 Q. 2261, excuse me.

2 A. 2261 sets out a process of -- and some
3 specifics and a process to fill in other specifics for
4 developing -- for developing funding formulas for the
5 State of Washington over a period of years.

6 What I find striking about it and favorable
7 about it is that it -- the process strikes me as quite
8 deliberative and iterative. Rather than starting off
9 with a large number that would be generated by some of
10 these cost function methods -- some of these costing-
11 out methodologies that have all the problems -- in
12 other words, instead of starting out with an answer, it
13 says, let's get started on this process and see and
14 evaluate on an ongoing basis how the various
15 interventions that are recommended by a variety of
16 working groups, called the Education Council and so on,
17 are playing out.

18 I would place specific emphasis on what
19 strikes me as a very thoughtful and detailed education
20 data improvement system laid out in part two. The
21 Education Data Center established in the Office of
22 Financial Management and working with the various other
23 groups, the Accountability Program Committee and so on,
24 to, A, make sure the data is generated that can be used
25 to track expenditures, track performance of students,

1 classrooms, teachers. It's a very ambitious -- it
2 probably looks set to establish probably one of the
3 best data systems in the country for educational
4 analysis integrated between financial and performance.

5 And the particular -- there's a whole set of
6 purposes to which this data center will be put. And
7 one that certainly struck me was on page 33 here, item
8 number -- item letter J, "To establish the capacity to
9 link program costs information with student performance
10 information to gauge the cost effectiveness of
11 programs."

12 So, that's, I think, a very strong example of
13 the process -- the thoughtful and deliberative process
14 and data-based process that 2261 is setting up that, as
15 I read this, will -- there will be a series of
16 interventions and programs that will be developed by
17 the Quality Education Committee and the various working
18 groups, the technical working group, translate that
19 into funding formulas, translating into staffing levels
20 to generate funding numbers, generate compensation
21 levels based on some other thoughtful criteria that are
22 put in here. And then those expenditures will be tied
23 closely to the -- through the data to the performance
24 levels here in the State of Washington, okay, to see
25 how they're working out and where to go from there.

1 That's -- it seems to me one of the best that
2 I've seen along those lines.

3 Q. Okay.

4 A. There are some specifics in here that are --
5 such as the number of hours per year of instruction.
6 There's some specific guidelines for the committee that
7 will be developing the compensation structure. As I
8 read it -- it looks, with some specific guidelines, to
9 move away from the typical salary grid of steps and
10 educational credits. That has not been found to be
11 correlated with educational success.

12 There is specific guidelines in here to
13 establish a compensation criteria that does recognize
14 variation across the state in -- in competitive salary
15 levels, the labor market conditions. Doesn't have
16 quite as full a specification on that as I might like,
17 but it's moving in that direction. Would I prefer to
18 see it specified in examination of shortages and
19 surpluses which would be the economically relevant
20 methods for determining competitive salary levels.
21 But, that's certainly feasible that that kind of
22 analysis could be done within this context.

23 Q. When you mentioned a moment ago compensation,
24 getting way from the compensation schedule based on
25 experience and education --

1 A. Right.

2 Q. -- and that you say isn't shown -- related to
3 performance, can you elaborate on what you mean by
4 that?

5 A. Well, the -- and Washington is certainly, by
6 no means, alone in this. Typically cross the country,
7 salary schedules are based on a pretty strict grid, a
8 one -- the rows of columns, depending on which way the
9 grid is depicted, will have steps -- what are called
10 steps which are essentially years of service, and there
11 will be columns, let's say, will have whether you've
12 got a master's or whether you've got a bachelor's,
13 whether you've got 30 hours of credits in between. And
14 that grid, that matrix, will totally determine what
15 your salary is.

16 And there's -- it's been shown over and over
17 again by labor economists that there is very little
18 rationale for that as opposed to a more performance-
19 based salary schedule, a schedule that may be somewhat
20 sensitive to the particular subject matter, which gets
21 into the issue of shortages and surpluses and with the
22 competing professions. Competing professions might be,
23 say, math and science, for example.

24 And the typical -- the salary grid sort of
25 doesn't take any of that into account, rather, instead,

1 it focuses on these other two factors which are
2 largely -- largely unrelated to student performance or
3 economic necessity.

4 Q. Okay. Does 2261 attempt to change,
5 overnight, the school funding apparatus in Washington
6 state?

7 A. No. It's got a phase-in period of seven
8 years, I believe it is, with the different committee
9 reports coming in at different stages along the way.

10 I think one is due December 1st and then
11 another one is due, I believe, in January for various
12 pieces of this that will help inform the appropriations
13 process when the appropriations bill is passed. And,
14 certainly, a seven-year phase-in is, by no means,
15 unusual. And, in fact, I would say it's -- that's what
16 we have in Massachusetts. It's what we've seen in
17 other states as well.

18 It allows for a more thoughtful and
19 deliberative increment to expenditures so they can be
20 used wisely to throw all the money -- whatever
21 increments you're going to have. If you throw it all
22 at once, it's not likely to be well used.

23 In fact, even Massachusetts, there were some
24 who thought even seven years was too quick, that the
25 expenditures rose too fast and people didn't know what

1 to do with the money.

2 So this gets away from that. And, again, I
3 would emphasize that -- so there's learning going on
4 both in the schools as the resources are being
5 incremented, and, also, again I would emphasize, at the
6 state level through the Education Data Improvement
7 System which is evaluating what the programs are
8 achieving here in Washington on an ongoing basis.

9 And, again, I emphasize -- the reason I
10 emphasize the here in Washington is, you know, the
11 problem that arises in a lot of the educational
12 research is the issue of replicability. Okay? So a
13 program that says, okay, here's these results that were
14 found in some small pilot program someplace else, to
15 me, I assume that those will carry over to different
16 state, different context, is often not justified and,
17 in fact, is often -- there often have been
18 disappointments in that regard.

19 Q. Overall, do you view 2261 -- House Bill 2261
20 as a reasonable -- rational and reasonable approach to
21 education reform in the State of Washington?

22 A. I do.

23 MR. MUNICH: Your Honor, I believe that's all
24 the questions I have for Dr. Costrell.

25 We'd offer Respondent's 1339.

1 THE COURT: Substitute 1339 is offered.

2 MR. EMCH: No objection to substitute 1339
3 your Honor.

4 THE COURT: Substitute 1339 is admitted.

5 EXHIBIT ADMITTED

6 THE COURT: All right. Why don't we take our
7 morning recess for 15 minutes at this time, and then
8 we'll proceed with cross-examination of Dr. Costrell.

9 Doctor, you may step down. Court will
10 be at recess.

11 (Whereupon a recess was taken.)

12 THE COURT: Please be seated.

13 Dr. Costrell, if you would retake the
14 stand, please.

15 Mr. Emch.

16 MR. EMCH: Thank you, Your Honor.

17 CROSS-EXAMINATION

18 BY MR. EMCH:

19 Q. Hello, again, Mr. Costrell.

20 A. How are you, Mr. Emch?

21 Q. Good to see you.

22 Now, you first met with defense counsel,
23 Mr. Clark, about a year-and-a-half ago; is that right?

24 A. I'm sure you're drawing on something I said
25 in the deposition. That sounds right.

1 Q. Okay. Well, let me refresh your memory --

2 A. Yeah.

3 Q. -- a little bit.

4 You mentioned that there was some type of
5 professional meeting in Mr. Munich's law firm in
6 Missouri about a year-and-a-half ago?

7 A. There was, although I believe I met Mr. Clark
8 before then.

9 Q. Okay. I'm not referring to the meeting about
10 this case. I'm referring about a meeting --

11 A. Just meeting him at all.

12 Q. Yeah. There was a -- I think there was a --
13 I think it was an American Education Finance
14 Association meeting at Mr. Munich's offices?

15 A. Okay. You're contemplating two things.

16 Q. Yeah.

17 A. There was a -- I believe I met Mr. Clark at
18 an American Education Finance Association meeting
19 first, which is a professional organization that has
20 annual meetings, and researchers and others come to
21 those meetings, and I was introduced to him briefly at
22 that meeting.

23 Q. Was that in 2008?

24 A. Sounds about right.

25 Q. And was that at Mr. Munich's offices?

1 A. No.

2 Q. It was --

3 A. No. The annual meeting of the AFA are not in
4 Mr. Munich's office. They would be at, like, a
5 convention town. It was probably at the -- may have
6 been in Nashville. I'd have to refresh my memory.

7 Q. But you met Mr. Clark at some point earlier
8 than the meeting with Mr. Munich and Mr. Clark.
9 Sometime in 2008; is that right?

10 A. Sounds about right, yeah.

11 Q. Okay. At that meeting, when you met
12 Mr. Clark, you spoke -- you told me in the deposition
13 you spoke about cost functions; is that right? Cost
14 functions?

15 A. Yeah. Could you refer me to the page number
16 in the deposition?

17 Q. Sure. Sure. If I need to do that, I guess
18 we can get that started.

19 MR. EMCH: Your Honor, move to publish the
20 deposition of Dr. Costrell.

21 THE COURT: The deposition of Dr. Costrell
22 will be published at this time.

23 MR. EMCH: The correction sheet as well, Your
24 Honor.

25 Your Honor, may I approach the witness?

1 THE COURT: You may, counsel.

2 BY MR. EMCH:

3 Q. Dr. Costrell, here's your deposition, as well
4 as your correction sheet. I'll have you take a look at
5 page 21, please.

6 A. Okay.

7 MR. EMCH: 21, counsel.

8 THE WITNESS: I'm going to assume this is the
9 same as the copy that I brought that I reviewed --

10 Q. I assume so.

11 A. -- that I reviewed -- that I reviewed for
12 corrections.

13 Q. Okay. Yes, it is the same. Just show it to
14 me and I can tell you. Yep, it's the same document.

15 A. Okay.

16 Q. So if you'd look at page 21, Dr. Costrell.
17 I'm just going to read it there --

18 A. Sure.

19 Q. -- just to speed this up a little bit.

20 A. Sure.

21 Q. Actually, its on the bottom of page 20 and
22 you were talking about a couple instances of meeting
23 with counsel, and I'd asked you, What do you recall
24 about the first meeting and after that first meeting,
25 and your answer was, "There was an instance where a

1 seminar was set up for various legal personnel and
2 school financing in Kansas City."

3 A. Right.

4 Q. "And I was one of several people who made
5 presentations at that seminar regarding areas of our
6 expertise. Mr. Clark was at that seminar as well."

7 "Question: When was that seminar? Answer:
8 I believe it was last year. Question: 2008? I
9 believe so. Question: Who set up the seminar, do you
10 remember? Answer: It was set up by the law firm of
11 Stinson, et al. Question: Is that John Munich's law
12 firm? Answer: Correct."

13 And then I went on at the bottom of that
14 page, what was the -- I asked, "Question: Just
15 generally, what was the content of what you spoke
16 about? Answer: Cost functions."

17 Is that ringing any bells, Dr. Costrell?

18 A. Yes. Yes. And --

19 Q. Okay.

20 A. Right. And the intervening question was the
21 subject matter of this case and the answer was no, and
22 it was a generic type of seminar. So I spoke
23 generically about cost functions with particular
24 reference to the case in Missouri that had recently
25 concluded.

1 Q. Okay. And so all I'm asking about is the
2 2008 meeting right now.

3 A. Right.

4 Q. And my question to you, sir, is: After you
5 met with Mr. Clark, the state's counsel, did anyone
6 from the State Attorney General's Office ever ask you
7 to make a presentation to the Washington State Joint
8 Task Force on Basic Education Finance?

9 A. No.

10 Q. And did the Attorney General's Office ever
11 ask you to talk to the Basic Education Finance Task
12 Force or provide any input to the Task Force in any
13 way?

14 A. No.

15 Q. In fact, you didn't make any presentations to
16 the Basic Ed Finance Task Force; is that right?

17 A. That's correct.

18 Q. And in this case you didn't formulate a
19 professional opinion regarding the final report of the
20 Joint Task Force on Basic Education Finance?

21 A. That's correct.

22 Q. Did you go behind or look at any of the
23 numbers reflected in the Task Force report?

24 A. Again, the numbers that I did go into -- go
25 behind were with regard to the Washington Adequacy

1 Funding Study which was presented, and some of those
2 numbers were presented, in the -- in the Minority
3 Report.

4 Q. Okay.

5 A. So which, I guess, means it was rejected by
6 the Task Force, but it was in the Minority Report.

7 Q. So the scope of your work and the focus of
8 your work was, in terms of looking at actual data
9 numbers, was limited solely to the Washington Adequacy
10 Funding Study?

11 A. The -- right. And the data that came from
12 that, which -- the data that we used in that which came
13 from the state.

14 Q. Dr. Costrell, did the state or anyone from
15 the Attorney General's Office ask you to provide any
16 information or opinions regarding the Washington Learns
17 Final Report?

18 A. No.

19 Q. And, Dr. Costrell, did the state or anyone
20 from the Attorney General's Office ask you to provide
21 information or offer any opinions regarding the
22 Washington State Institute for Public Policy Research?

23 A. Well, I was asked to review the report -- the
24 Task Force report largely for background purposes, to
25 have the context on which my work would take place.

1 And the organization that you mentioned did
2 staff work for that, and so, in the course of that, as
3 I indicated in my deposition to you, I did read the
4 appendix -- one of the appendices to that report which
5 was prepared by that outfit.

6 I also reviewed the study that was performed
7 for that -- for that committee by Lori Taylor. I can't
8 remember whether -- that was under the auspices of this
9 organization that you mentioned or not.

10 Q. And refer to Washington State Institute for
11 Public Policy. Did you review some material relating
12 to Ben Merik?

13 A. Yes, I saw a spreadsheet that Ben Merik
14 presented.

15 Q. And in this case, are you rendering any
16 opinions about Ben Merik's work?

17 A. No.

18 Q. Are you rendering any opinions about Lori
19 Taylor's work?

20 A. I didn't prepare one. I don't believe he
21 asked me about it -- I don't believe Mr. Munich asked
22 me about it.

23 Q. Other than reviewing the Task Force report as
24 background material, you're not rendering any opinion
25 about the Task Force or the final report; is that

1 right?

2 A. Could you repeat the question, please?

3 Q. Sure. Yeah. Other than reviewing the Basic
4 Education Finance Task Force final report for
5 background, you're not rendering any opinions about the
6 conclusions or the research presented in the Task Force
7 final report; is that right?

8 A. Except for the Minority Report that was based
9 on the Washington Adequacy Funding.

10 Q. So the only thing you're rendering is with
11 respect to the Washington Adequacy Funding Study,
12 correct?

13 A. Correct. Actually, not even really been
14 asked about that. I was just asked about the
15 methodologies that were used in that.

16 Q. So you weren't asked for an opinion about the
17 Minority Report overall. You were just, specifically,
18 asked to take a look at that one Washington Adequacy
19 Funding Study; is that right?

20 A. Well, that is the Minority Report, basically,
21 of the full-funding coalition.

22 Q. Dr. Costrell, did you review any work of
23 Picus and Odden with respect to Washington's
24 educational finance or --

25 A. I did not.

1 Q. -- education?

2 A. I did not.

3 Q. You didn't make -- just to be sure the
4 record's clear, you didn't review any work from
5 Mr. Picus or Mr. Odden with respect to Washington
6 education; is that right?

7 A. That's correct.

8 Q. So you're not rendering any opinion about
9 Picus and Odden's work in this case; is that right?

10 A. That's correct, except, again, insofar as it
11 relies on one or another of the methodologies that I've
12 discussed in general terms. They are commonly used,
13 the Evidence-Based Approach, which I expressed my views
14 on.

15 Q. But you, specifically, didn't review their
16 work, did you?

17 A. No, I did not review their work in this case,
18 although their studies are pretty similar from state to
19 state.

20 Q. You're a member of the American Education
21 Finance Association?

22 A. I am.

23 Q. And do you know whether Mr. Picus or
24 Mr. Odden, whether they've been president of that
25 organization?

1 A. They may well have been. One or the other
2 may well have been. They're certainly active members
3 in it.

4 Q. Dr. Costrell, with respect to this lawsuit,
5 you signed an expert agreement with the State of
6 Washington in about February of 2009; is that right.

7 A. That sounds right.

8 Q. And --

9 A. Is that -- that's the agreement retaining me?

10 Q. Correct.

11 A. Okay.

12 Q. The contract you had with the state.

13 A. Correct.

14 Q. That was dated February 1st, 2009. Does that
15 sound about right?

16 A. That sounds about right, yeah.

17 Q. Okay. And that agreement was addressed to
18 you in your capacity as -- it was addressed to you at
19 your -- your home in Arkansas; is that right?

20 A. It was either my home or my office. I can't
21 remember.

22 Q. Is it fair to say the time you signed the
23 expert agreement, you were someone that -- you
24 considered yourself to be a person with expert
25 knowledge about this case?

1 A. I had expert knowledge, I -- not necessarily
2 about this case. So I had not, you know, begun my
3 study, really, of this case -- of this state.

4 Q. At the time you signed the expert agreement,
5 did you consider yourself someone who would have some
6 expert knowledge that may be relevant to the case?

7 A. I did.

8 Q. And did you consider yourself someone who may
9 testify in this case?

10 A. That was a distinct possibility, yes.

11 Q. And the contract amount for your fees was
12 originally \$50,000; is that right?

13 A. That's correct. It was the cap on it.

14 Q. That was the original cap?

15 A. That was the original cap, yes.

16 Q. And about the time you had your deposition,
17 that was toward the end of July, you'd incurred about
18 \$50,000 already?

19 A. Sounds right.

20 Q. Okay. And was the limit under your contract,
21 was it increased to \$80,000?

22 A. It was.

23 Q. Is it fair to say, sir, the consulting work
24 you're doing in this case under your contract with the
25 State of Washington is going to be a significant chunk

1 of your income in 2009?

2 A. I can give you my other income, and you can
3 do the ratios.

4 My 12-month salary with my -- I mean nine-
5 months salary for \$140,000 as a public employee, that's
6 public knowledge. I also have summer money from
7 my endowed chair and from various research grants,
8 which brings it up to the vicinity of \$180,000. I have
9 some other consulting income in some other matters --
10 other -- related to pension research and school funding
11 research in other states.

12 So, it's less than -- I would say it's less
13 than -- certainly less than a half, maybe less than a
14 third, but certainly not insignificant.

15 My hourly rate is \$300 an hour. So it -- if
16 you net out the travel expenditures, which are part of
17 the expenditures that you mentioned, you can work out
18 how many hours it is.

19 It's a significant number of hours to go
20 through in great detail the spreadsheets that I
21 mentioned to you, about 250 spreadsheets to try and
22 figure out what -- what was going on and to do a
23 careful analysis of the data that was available as a
24 result of that study for -- because I do a pretty a
25 thorough job in terms of checking and rechecking my

1 numbers to make sure they're right. So it's time
2 consuming.

3 Q. Okay. Dr. Costrell, I'm going to focus on
4 your next meeting.

5 You said you had another meeting with the
6 state's counsel about this case. That was in early
7 2009. Does that sound about right?

8 A. So -- okay. Yes. You're referring to the
9 meeting -- there was a general meeting that included --
10 in Kansas City.

11 Q. No, I'm referring to the meeting with
12 Dr. Munich -- with Mr. Munich and Mr. Clark at
13 Mr. Munich's law firm.

14 Does that sound familiar to you?

15 A. Right. Well, both of those two meetings that
16 you're referring to were at his law firm. There was
17 the -- well, there's three meetings we've talked about.

18 Q. Why don't you describe which meetings they
19 are.

20 A. Okay.

21 Q. Maybe we can just clarify that.

22 A. So before I was retained for the case, I met
23 Mr. Clark and introduced to him. I didn't -- that was
24 about it at the professional -- annual professional
25 meeting of the annual -- at the American Education

1 Finance Association. I believe that was in 2000 --
2 March 2008, I'm guessing.

3 Then there was a fall of 2008 legal seminar
4 that was organized by Stinson Morrison and so on.
5 Legal personnel came there for the equivalent of
6 professional development credits. I don't know what
7 it's called in law, but something like that in --
8 that's what it's called in education.

9 And so I made general presentation about cost
10 functions and other costing-out methodologies.

11 And then after I was retained in February --
12 I'm thinking your date sounds right -- of 2009, there
13 was a meeting -- there was a meeting, also in Kansas
14 City, where a number of the potential expert witnesses
15 in the case were either present or in by --
16 conferenced-in by phone to receive a general background
17 presentation by Mr. Clark with regard to the history of
18 the school finance litigation in the state, and for us,
19 on the other hand, to talk about our particular areas
20 of expertise prior to looking at the specifics in the
21 case.

22 Q. And at that meeting, just generally, do you
23 recall -- I'm referring to your deposition here just to
24 try to --

25 A. Sure. What page are you on?

1 Q. 28, line 12. But just your recollection of
2 who was there. Was Mr. Clark there? Was Ms. Bashaw
3 there?

4 A. Correct.

5 Q. Mr. Munich was there. Dr. Armor was there.
6 Dr. Hanushek, Mr. Melmer, all those folks and
7 yourself? At least those folks were at that meeting?

8 A. Again, as I said in my deposition, I was a
9 little hazy as to who was there in the flesh and who
10 was there on the phone.

11 But those were individuals who were -- who
12 were present for this presentation.

13 Q. Okay. Fair enough.

14 Dr. Costrell, you're currently a professor at
15 the University of Arkansas; is that right?

16 A. Yes.

17 Q. Have you ever represented plaintiffs or
18 petitioners in a school funding case before?

19 A. Plaintiffs or petitioners? No, none of them
20 have ever called me.

21 Q. Have you ever been adverse to a state in
22 school funding litigation?

23 A. Can I say my joke? When you say adverse to a
24 state, I was going to say New York Yankees, yes.

25 Adverse to them. But, no. I'm not -- sorry. Cheap

1 shot.

2 Q. You'd consider --

3 A. Just trying to keep us all awake.

4 Q. -- New York Yankees a state?

5 A. Well, they are -- yeah, they have
6 imperialized, yeah.

7 Q. Okay.

8 A. Pardon? As a former Boston Red Sox fan.

9 Anyway, the answer to your question is no, I
10 have not participated in a legal proceeding against any
11 state.

12 Q. Have you ever served as a superintendent in
13 the State of Washington?

14 A. No, sir.

15 Q. Have you ever served as a superintendent of
16 schools for any state?

17 A. No, I have not.

18 Q. Have you ever served as a kindergarten
19 through 12th grade teacher?

20 A. No, I have not.

21 Q. Have you ever served as --

22 A. I've talked to my kids' classes from time to
23 time, but, yeah.

24 Q. You taught in your personal kid's class?

25 A. That's teaching. Went and made a

1 presentation on the --

2 Q. Cost function?

3 A. On the -- no, it was -- well, actually I did
4 a little bit of economics. That's true. You'd be
5 impressed with what kindergartners can learn about
6 supply and demand curves. It was interesting.

7 Q. Kindergarten is important for kids?

8 A. It certainly can be very helpful. My kids
9 had a good kindergarten class.

10 Q. Did your kids get a full-day kindergarten or
11 half-day kindergarten?

12 A. Half day. They're reading. My kid was
13 reading half-day kindergarten and writing.

14 Q. Have you ever served as a --

15 A. Allow me to brag a little bit.

16 Q. Have you ever served as a K through 12
17 principal?

18 A. No, I have not.

19 Q. Have you ever served as a K through 12
20 administrator?

21 A. No.

22 Q. Have you ever served in any sort of
23 educational capacity in the State of Washington?

24 A. No, sir.

25 Q. Other than this case, do you have any

1 personal experience with Washington state public
2 schools?

3 A. Personal experience with Washington state
4 schools?

5 Q. Correct.

6 A. No, sir.

7 Q. And did you review any F-195s or F-196s in
8 connection with your work in this case?

9 A. I reviewed and I presented data which I --
10 which I believe came from the F-195s and F-196s, at
11 least that was what the Washington Adequacy Funding
12 Study said their data came from. So I reviewed -- but
13 not the actual original forms themselves.

14 Q. You didn't analyze the form or any activity
15 codes or any of the spreadsheets or things like that?
16 You didn't look at the forms, right?

17 A. I think I may have looked at some related
18 lists of job titles and so on, but I don't believe they
19 were specifically the F-195 and F-196 forms.

20 Q. You didn't analyze any funding formulas in
21 this case, did you, sir?

22 A. I did not, no.

23 Q. Dr. Costrell, did you rely on the Washington
24 State Constitution in forming your opinions in this
25 case?

1 A. I read -- I read the sections -- I -- the
2 first set of documents that I was given in conjunction
3 with this case was the set of the legal proceedings --
4 some of the legal proceedings. So in conjunction with
5 that where there was certainly a lot of discussion of
6 the various clauses of the Washington State
7 Constitution, I certainly read them and saw the legal
8 debates that were taking place over them.

9 But the answer to your question is no, I did
10 not use them in my analysis.

11 Q. And in connection with your work in this
12 case, you didn't evaluate the efficiencies of public
13 schools in Washington, did you, sir?

14 A. I personally did not, but in reviewing the
15 research that was done in the context -- for the
16 Washington Adequacy Funding Study, I did take a look at
17 the work by Professor Baker who performed a couple
18 variances of the cost function analysis. The one that
19 was presented in the final report is the one that I
20 discussed here. But there was another one that was in
21 his technical appendix, which is called -- uses what's
22 called Stochastic Frontier Analysis, and it actually
23 does evaluate the efficiency of the expenditures. And
24 my recollection -- and it found that the average
25 expenditures were about \$400 per pupil above his

1 estimate of what would be efficient level of
2 expenditures.

3 Q. Did you, in looking at all the materials that
4 you reviewed in the case, did you see any indication of
5 inefficiencies in the use of resources?

6 A. Again, beyond what the statistical analysis
7 of the Stochastic Frontier Analysis performed by
8 Dr. Baker, I did not.

9 Although, again, as we discussed earlier,
10 when you see this wide range of expenditures for a
11 given performance level, that certainly is telling you
12 that a sig -- it certainly is telling you that
13 efficiency is very much in question. And that's, in
14 fact, what the statistical technique that Dr. Baker had
15 used tried to get you with the study I just mentioned
16 to you.

17 Q. Dr. Costrell, if you could take a look at
18 page 88 of your deposition transcript, please. I'm
19 looking at page 88, line 14.

20 "Question: Did you see any indication of
21 inefficiencies in use of resources? Answer: Again, I
22 did not explore that."

23 Did I --

24 A. Right. I said at the bottom of the previous
25 page, it says, I personally have not -- I have not

1 evaluated that. But, as I mentioned today, you know, I
2 did -- I had, in fact, reviewed these other studies
3 which produced in conjunction with the Washington
4 Adequacy Funding Report that did find this level of
5 inefficiency that I referred to.

6 Q. Dr. Costrell, you, yourself, don't have a
7 definition of Basic Education; is that right?

8 A. That's correct.

9 Q. And you don't know what the meaning of Basic
10 Education would be here in Washington; is that right?

11 A. As I said, I leave that to the lawyers.

12 Q. And you don't have a definition of inadequate
13 education, either, do you, sir?

14 A. Again, that's a very legally -- I've learned
15 over the years that's a legally -- heavily laden term.

16 Q. So is that answer no then?

17 A. You know what, I'll be beyond that.

18 First of all, I don't know what the lawyers
19 mean by that. And, second of all, as I've indicated,
20 my whole testimony -- very much of my testimony is
21 based on a projection. The premise of the adequacy
22 project, which is to define a particular level of
23 performance and then try and tie a certain level of
24 expenditures to it.

25 Q. And so it's fair to say then, you're not

1 relying on any definition of a basic or adequate
2 education for purposes of your opinions in this case,
3 correct?

4 A. Again, I've evaluated the costing-out
5 methodologies, which -- some of which would use a vague
6 concept of that -- of adequacy, some of which would use
7 a more precise concept of methodology. For example,
8 when we're using a cost function. Okay? The example
9 that I mentioned here was a -- I gave the analysis
10 using the cost function that was produced for the
11 Washington Adequacy Funding Study to say what would a
12 cost-equated methodology to increase performance from a
13 50 percent pass rate to 100 percent pass rate.

14 So that's a specific notion of what you might
15 refer to adequacy. But, again, I'm not 100 percent
16 sure what the legal community refers to there.

17 Q. Did you review and rely on House Bill 1209 in
18 forming your opinions in this case?

19 A. Is that the 1993 bill?

20 Q. Correct.

21 A. I reviewed the 1993 bill.

22 Q. Were you relying on that in forming your
23 opinions in this case?

24 A. No.

25 Q. And is it -- it's also true you don't have an

1 opinion about whether public school children in the
2 state of Washington are getting an adequate education?

3 A. That's correct.

4 Q. And you don't have an opinion about whether
5 Washington school children are getting the knowledge
6 and skills they need to graduate or effectively
7 participate in our economy or pursue college or compete
8 in the global marketplace?

9 A. Again, beyond examining the performance data
10 that I referred to in my presentation here that was
11 embodied in -- which we've talked about, which had test
12 scores of it and which had measures of improving
13 schools in it, that's the level of examining of
14 performance that I conducted.

15 Q. Other than looking at that data, you didn't
16 evaluate the WASL test itself or --

17 A. No. I certainly did not go into the WASL
18 test itself.

19 Q. And you didn't evaluate measurements of
20 academic performance in Washington state, the tools to
21 measure it?

22 A. I did not go into that. Again, in the course
23 of my background reading on this, I certainly ran
24 across WASL data and the like, the graduation rate
25 data. But I did not go into analyze those.

1 Q. You didn't evaluate any transportation issues
2 in this case, did you?

3 A. No.

4 Q. You didn't review any construction-related
5 Task Force work in the State of Washington?

6 A. Nope.

7 Q. And when you were doing your review, you
8 didn't look at the source of funding to school
9 districts as part of your work, did you?

10 A. As we discussed in the deposition, I --
11 when I -- in fact, when the initial presentation was
12 made by Mr. Clark at the meeting that you cited, before
13 I begun my work, he presented the report card -- some
14 of the report card data for the state which gave a
15 breakdown of the expenditures by source, the very
16 top-level breakdown by state, local, federal, and
17 other.

18 And I was struck at the time by how high a
19 proportion of the expenditures here were state-funded
20 compared to what I was used to -- certainly compared to
21 Massachusetts, which is very much a locally-funded
22 state.

23 So -- but beyond that, no, I did not look at
24 the breakdown by district or the like.

25 Q. So you didn't look about whether funding came

1 from a local levy or a source other than the state,
2 things like that?

3 A. Again, beyond that top-level presentation
4 that I mentioned for the state as a whole.

5 Q. So, no other than that; is that right?

6 A. Again, I did not look at the breakdown of the
7 funds that were used. Again, all these data that I've
8 used here, that are presented here are expenditures
9 without regard to source.

10 Q. And in this case, Dr. Costrell, are you
11 rendering an opinion about whether Washington state is
12 underfunding Basic Education?

13 A. No, I'm not.

14 Q. And in this case, Dr. Costrell, are you
15 rendering an opinion about whether the state has
16 violated its constitutional duty?

17 A. No, I am not.

18 Q. Dr. Costrell, if we can take a look at the
19 PowerPoint slides here that Mr. Munich marked. This is
20 substituted Trial Exhibit 1339, please, sir.

21 There's some references to exemplar schools.
22 We talked a little bit about that.

23 A. Right.

24 Q. And just to make sure I understand your
25 testimony. With respect to exemplar schools, you

1 generally didn't have a problem with the way those
2 schools were selected, did you?

3 A. Again, as I stated, the general criteria
4 which I reviewed on Dr. -- I mean, Mr. Munich's
5 examination seemed reasonable to me, and it seemed to
6 accord, in many respects, with the criteria that I had
7 set out in my professional writing previously.

8 Q. Okay. Dr. Costrell --

9 A. But I did not get into the details of it.

10 Q. Okay. Dr. Costrell, do you know what the
11 poverty line is?

12 A. Do I know what the poverty line is?

13 Q. Do you know what the line that's been set,
14 the federal poverty line?

15 A. Well, it varies by family size.

16 Q. Do you have an understanding -- family of
17 four, do you know what the poverty line would be for
18 that?

19 A. I believe it's in the 20s.

20 Q. Okay. What about the income eligibility
21 guidelines for freely and reduced price lunch, do you
22 know what the numbers are there?

23 A. It's -- I believe it's poverty plus a certain
24 percentage. I think it may go up to 150 percent of
25 poverty, something like that. And, of course, it's

1 different -- you know the free -- the standard for the
2 free lunch is a different standard for the reduced-
3 price lunch.

4 Q. Dr. Costrell, if you could look at page 103
5 of this slide. This is one of your graphs.

6 A. Yes, sir.

7 Q. And I'm looking at the graph that's talking
8 about -- let's see. Class size. I believe it -- was
9 this one talking about class size? I'm looking for the
10 one that talks about --

11 A. 103 is personal dollars per pupil.

12 Q. Okay. Let's look at the one for
13 student/pupil (sic) ratios.

14 A. There's several of them, 11, 26, 20, 22.

15 Q. Sure. Let's just take a look at 20, for
16 example.

17 My question is simply this: Do you know how
18 student/pupil (sic) ratios and class size differ in
19 Washington?

20 A. Do I know the difference between
21 student/teacher ratios and class size? Is that your
22 question?

23 Q. Right.

24 A. I know that -- I know that they are not quite
25 the same thing.

1 Q. What's your understanding of the difference?

2 A. Well, the student/teacher ratio is, which is
3 the more readily-accessible figure, is the -- it's
4 simply a count of the number of students relative to
5 the number of classroom teachers.

6 A particular -- it may differ from the class
7 size, for example. There may be -- because some of the
8 teachers would be -- would not have their own
9 classroom, for example, maybe Special Education
10 teachers and the like.

11 Q. If you could take a look at -- if you could
12 take --

13 A. Most states have a hard -- you know, in the
14 data on class size itself is typically hard to come
15 by. And student/teacher ratio is often used as the
16 most readily-available proxy for that.

17 Q. If you could take a look at page 81, please,
18 same exhibit, 1339. Looking at page 81.

19 This is your scattergram chart.

20 A. Yes, sir.

21 Q. And you talked a little bit about this.

22 That line -- that line goes up; is that
23 correct?

24 A. Very slightly, yes.

25 Q. Okay. So there's some relationship, some

1 positive relationship shown in this chart; is that
2 right?

3 A. This particular regression had -- I mean, one
4 needs to distinguish between what is called
5 statistically significant coefficient and a -- if you
6 will, a practically significant coefficient.

7 And this particular regression that was --
8 appeared in the final report of the Washington Adequacy
9 Funding Study, again, prepared by Dr. Baker, had a
10 statistically significant coefficient there, although,
11 as I've testified, it was practically very, very small,
12 which is why it translates into such a small dollar
13 amount required to double -- to double the pass rate.

14 There were other variances of this regression
15 that Dr. Baker performed, and when I reviewed his
16 computer printout, one or more of them did not have a
17 statistically significant relationship. And this is a
18 matter, again, of -- which I could -- which goes into
19 my evaluation of cost-function methodology, which is,
20 this very tenuous relationship is often very
21 sensitive. It's not robust. You make minor changes in
22 the specification of the equation and you get different
23 results, such as whether or not it's even statistically
24 significant, never mind whether it's large or small.
25 And this was actually a very good example of that.

1 So, I think that's a pretty full answer to
2 your question.

3 Q. Okay. So, in other words, your an economist
4 and statistician; is that right?

5 A. I'm an economist. I'm a policy analyst as
6 part of my profession. Statistics is certainly an
7 important part of econometrics and so on.

8 Q. So what you're saying is that --

9 A. And I have policy -- high-level policy
10 experience as well.

11 Q. So what you're saying is you're not
12 satisfied, based on your perspective as an economist;
13 is that right? You're not --

14 A. Satisfied with the respect to what?

15 Q. Satisfied with respect -- I'll strike that.
16 Strike that.

17 Let's take a quick look at cost function.
18 You talked a little bit about cost-function
19 methodology.

20 Does the cost function regression measure
21 test scores or improvement in test scores?

22 A. As you can see from the diagram, what's at
23 the bottom there is the test score itself. So that
24 would be the explanatory variable that's typically used
25 in the cost function. It's the level of the test

1 scores.

2 Q. So the measurement here could be what certain
3 students are doing, not necessarily what schools
4 themselves are doing. It's not evaluating what the
5 schools are doing in the school environment, is it?

6 A. Well, they have certain variables there
7 for -- to try to control for the kinds of schools, to
8 try and control for the demographics of the students.

9 So, the attempt there is to try and ascertain
10 how well the -- you know, how well the schools -- well,
11 it's actually trying to ascertain the -- the variable
12 is the cost -- or it's actually the spending, truth be
13 told. It's not really the cost. And those are two
14 distinct concepts.

15 Cost is, embodies the notion of efficiency,
16 and spending is simply the spending.

17 And this is really a spending function as
18 opposed to a cost function by what's put forth as a
19 cost function -- represented as a cost function.

20 And what it's trying to ascertain is what the
21 spending or cost -- again, not the same thing, but
22 purported to be -- is required to achieve a certain
23 level of performance by the students, controlling for
24 the demographics and the like, the size of the school
25 and the like.

1 Q. So just boiling down your testimony then to
2 make sure I understand.

3 Are you saying that there's no way to
4 determine the cost of providing a Basic Education for
5 Washington students?

6 A. There's a lot of terms in there to unpack.

7 As I've indicated before, I've been around
8 the track enough to know that the word Basic Education
9 in the State of Washington is a legally freighted term,
10 so I certainly would have no opinion on that.

11 I think my testimony's been pretty clear,
12 which is, that there is no systematic relationship that
13 we've been able to discern from the data, or the social
14 scientists have been able to determine from the data
15 for 40 years or more, both in general with regard to
16 the relationship between inputs and performance level,
17 and also, as it turns out in the -- not surprisingly,
18 in the data for the State of Washington that I've been
19 able to examine in this case.

20 There's a lot of nonmonetary things that are
21 going on here. A lot of nonmonetary things that are
22 going on that affect the performance. And that's why
23 so in a diagram like this, when you see schools out
24 here that are -- and each dot represents a school, by
25 the way, that are performing very, very high levels for

1 no more expenditures than those down here.

2 You know, for example, in the State of
3 Massachusetts, when we see -- we saw a spread of those
4 for the schools in the City of Springfield, very poor
5 city, and you had schools out here that were performing
6 at levels of performance on the MKST that were
7 comparable to my own kids' school in the fairly elite
8 City of Brookline -- Town of Brookline. And these were
9 schools that were operating at 70, 80, 90 percent
10 poverty rates. Lots going on there besides the money,
11 obviously. They're spending no more than the other
12 schools in Springfield which were failing miserably.

13 So you go into those schools and you have a
14 look, what are they doing, what's the leadership, what
15 are they doing with the use of data and so on.

16 And you -- so that's what's going on in a
17 diagram like this, why you get these guys up here that,
18 you know, they're clear on the mission, that are
19 focused on the performance of the kids as opposed to
20 something else. And these other schools down here.

21 These are non -- there's a lot of nonmonetary
22 factors going into this variation, which are why I
23 think a very large reason why you have no success in
24 ascertaining a systematic relationship between the
25 money and the performance. There's just so much else

1 that's going on, much of which is far more important
2 than the money.

3 Q. Dr. Costrell, did you analyze any of the
4 nonmonetary factors that you're alluding to here today
5 with respect to your work in this case?

6 A. In the State of Washington, no, I did not.

7 Q. And, Dr. Costrell, isn't it true that you've
8 proposed a methodology for costing-out in some of your
9 own writings?

10 A. Not, it's not true. What I've -- in the
11 sense that you're using it here, in this -- in this
12 case. What you're referring to is the methodology that
13 I've laid out, which I testified to here as well, with
14 regard to variance on the Successful Schools Model, in
15 other words, the Improving School Model, it can come up
16 with what I refer to as a rational dollar amount for --
17 and let's be clear what it's for. It's for a rational
18 dollar amount for -- that schools that have
19 demonstrated they can achieve certain results with.
20 Okay? As opposed to the typical costing-out exercise,
21 which is to try and say, look, how much is it going to
22 cost to double performance or something like that,
23 which is -- which you simply cannot get out of the type
24 of exercise that -- that I -- that I -- that I have
25 written about.

1 Q. Have you published -- you published a few
2 times in the magazine called Education Next; is that
3 right?

4 A. I have, yeah. That's what I'm referring to.
5 That's the publication we're referring to.

6 Q. Fair enough. Is that a scholarly journal in
7 your mind?

8 A. It is. I believe that was in the research
9 section, that particular article. I've had some
10 publications in the research section, which are
11 typically refereed, and some publications in the
12 featured section, which are not -- which are not
13 necessarily refereed beyond the editors of the journal
14 itself.

15 But I think the writings you're referring to
16 are in the refereed section -- or in the research
17 section.

18 Q. Is that publication associated with the
19 Hoover Institute and Concerted Ideology?

20 A. It is published by the Hoover Institute at
21 Stanford University. It's got the -- the two academic
22 affiliations with it are Stanford University, which is
23 where the Hoover Institution is associated -- located,
24 and Harvard University.

25 I believe it's an unfair characterization to

1 ascribe ideology to it. It's a journal that is
2 devoted -- I think its -- I think its motto or, you
3 know, mission statement is to follow the facts wherever
4 they lead.

5 And I would prefer that my work be evaluated
6 on its merits rather than any imputed ideology, the
7 place where I published it.

8 Q. Okay. I think I just have a few more
9 minutes. I know everyone's anxious to try to get a lot
10 of witnesses in here.

11 Are you flying back to Arkansas today?

12 A. I am planning to. I changed my flight once.
13 It cost the taxpayers of the state \$216 for the flight
14 change, which you can add to the \$50,000 you talked
15 about.

16 Q. All right. Well, I will try to keep this
17 short. We're getting pretty close to the end here,
18 sir.

19 Let's talk a little bit about House Bill
20 2261.

21 A. Yes, sir.

22 Q. Dr. Costrell, do you agree that House Bill
23 2261 is missing a lot of specifics that need to be
24 filled in?

25 A. I have testified that it has a mix of

1 specifics, some specifics, and some blanks to be filled
2 in with regard to staffing ratios and the like and
3 compensation levels and the like and set up a process
4 of technical groups and quality education council and,
5 again, in my opinion, the very valuable Education Data
6 Center to help fill in those blanks on an ongoing
7 basis --

8 Q. And do you know --

9 A. -- in a formed fashion.

10 Q. Do you know whether House Bill 2261 is
11 scheduled to be funded in its current form?

12 A. Again, my -- as is typically the case, the
13 funding for any particular funding formula comes
14 through a General Appropriations Bill, and this sets up
15 a process to help inform the General Appropriations --
16 to help perform the General Appropriations.

17 Q. Do you have any expectations that the items
18 in 2261 will be funded by the Washington Legislature?

19 A. Could you repeat the question, please?

20 Q. Sure. Do you have any expectation that the
21 items in 2261 will be funded by the Washington
22 Legislature? Do you have an opinion on that?

23 A. I certainly was not asked to prepare an
24 opinion about the outcome of your political processes
25 here in the State of Washington. I was asked to

1 evaluate the legislation, 2261, which I read and gave
2 my opinion on.

3 Q. I asked you in your deposition this
4 question.

5 Did you see a dollar amount anywhere in 2261?

6 A. No, there was no dollar amount in 2261.

7 Q. Based on your own personal experience, do you
8 understand that Legislatures can't bind future
9 Legislatures?

10 A. I believe that was the case back in
11 Massachusetts, which I knew quite well. I'm not
12 familiar with Washington. That's a legal question.
13 I'm not here as a legal scholar.

14 Q. Dr. Costrell, as an economist, do you believe
15 teachers' salaries need to be sensitive to the
16 marketplace in which the teaching job is located?

17 A. I believe -- could you restate the question,
18 please?

19 Q. Okay. Sure. The question's straight out of
20 your deposition.

21 A. Sure. Give me the page number and I'll give
22 you the answers.

23 Q. Okay. Before I forget, Dr. Costrell, you
24 reviewed your deposition transcript; is that right?

25 A. I did and I provided the corrections to it.

1 Q. And you made a few corrections on that?

2 A. Yes, I did. Yes.

3 Q. Other than those corrections, you didn't have
4 any other changes?

5 A. I stand by it.

6 Q. Okay. And you made a few minor corrections,
7 but other than that, you were fine with it.

8 A. One was not minor. One was the word no,
9 which was missing.

10 Q. Okay. We haven't talked about that one
11 today, but --

12 A. Okay.

13 Q. Okay.

14 A. So what page are we talking about?

15 Q. I'm referring to page 67, line five now.

16 A. Sorry?

17 Q. Page 67, line five.

18 A. So I stated there, "I do think it is a good
19 idea to have teacher salaries" -- I think I elaborated
20 on here in a different place -- "reflect market
21 conditions that varied by locality." And I also went
22 on in another place in here to elaborate more on what
23 that might mean. It means being responsive to -- being
24 responsive to the economic variables of supply and
25 demand. And if you -- as I talked to my kindergartners

1 in my daughter's class, when you use supply and demand,
2 to see whether a price is too high or too low, you're
3 looking at shortages and surpluses.

4 Q. And just to --

5 A. And I also take it, again, as I believe I
6 testified, that 2261, I think, wisely makes some --
7 gives some guidelines to the committees that are going
8 to come up with compensation figures towards those
9 concepts.

10 Again, as I stated in my testimony, I would
11 have preferred that it would have gone a little further
12 in specifying the kind of economic analysis that should
13 be done involving shortages and surpluses, which may
14 vary, for example, by subject matter and the like. But
15 the general concept of moving away from uniform salary
16 scale, in terms of steps and educational level, and
17 also the uniformity -- general uniformity -- I
18 understand there's some exceptions, but the general
19 uniformity of that grid across the State of Washington
20 without reference to geographic variation I think are
21 wise guidelines set down by 2261.

22 Q. So you believe the current teacher
23 compensation system can be improved; is that fair to
24 say?

25 A. Again, based on -- I have not personally

1 studied it, but what I've read about it -- secondary
2 sources on it, do indicate that it has this grid, it's
3 not performance based, and it is not geographically
4 sensitive.

5 So assuming those are -- those
6 characterizations are correct, yes, it could be
7 improved upon.

8 Q. And, Dr. Costrell, do you agree that paying
9 competitive wages for nonteachers is also important
10 based on your experience as a --

11 A. Again, everything that I said previously
12 would apply to any type of employee -- public employee,
13 that it should -- would typically -- you need to do --
14 you know, it's better to be competitive than not to be
15 competitive, and that can let -- to determine that
16 would require supply and demand analysis of shortages
17 and surpluses.

18 Q. And you never hired teachers yourself, have
19 you?

20 A. As a taxpayer, I always hire my teachers.

21 Q. All right. Fair enough. Down to short
22 strokes here, Dr. Costrell.

23 Dr. Costrell, do you believe education is
24 important to democracy?

25 A. I do.

1 Q. And are academic standards important in
2 education?

3 A. They are, yes, indeed.

4 Q. And as an economist --

5 A. In the case of Massachusetts, I think it
6 shows that.

7 Q. As an economist, do you think it's important
8 to measure outputs?

9 A. I do. And I was pleased to see that the
10 Education Data Center in 2261 places specific focus on
11 that, as well as -- as opposed to just on the dollar
12 inputs.

13 MR. EMCH: That's all I have right now.
14 Thank you very much.

15 THE COURT: Thank you, Mr. Emch.

16 And, Mr. Munich, redirect examination.

17 MR. MUNICH: No redirect, Your Honor. We'd
18 ask the witness be excused.

19 THE COURT: Well, I get my turn.

20 MR. MUNICH: Very well, Your Honor. Excuse
21 me.

22 THE COURT: One of the prerogatives of a
23 bench trial.

24 MR. MUNICH: Indeed.

25 EXAMINATION BY COURT

1 Q. Dr. Costrell.

2 A. How are you, sir -- Your Honor?

3 Q. Good. Thank you.

4 If I can synopsise you're bottom-line
5 opinion, is that the studies or the scientifically
6 acceptable studies show that increased spending does
7 not ipso facto increase student performance.

8 A. Yes. Another way of stating that would be
9 that -- which is a little weaker -- is to say that
10 the -- the types of studies you're referring to have
11 not discerned a systematic relationship between the
12 two.

13 Q. So is the emphasis then, in your reiteration
14 of my statement, the word systematic?

15 A. That's part of it. Also the word discerned.
16 If there is an underlying relationship there, it's not
17 being picked up by the best techniques that we have.

18 Q. In other words, it may be there, may not be
19 there, but we can't, right now, quantify it?

20 A. Yeah. If you'd like, I can elaborate a
21 little bit more.

22 Q. Sure.

23 A. Because a lot of this has to do with the
24 range that you're looking at. Okay? If the -- if the
25 expenditure is zero, I think we can be pretty confident

1 that there will not be very good results. Okay?

2 So, to oversimplify -- the relationship is
3 nonlinear. Let's put it that way. If there is a
4 relationship, it's definitely nonlinear because,
5 obviously, you need to spend something.

6 Q. Right.

7 A. But beyond a certain point in this -- you'll
8 allow me, as an economist to invoke the Doctrine of
9 Diminishing Returns. Okay?

10 So if there is a relationship, one might
11 expect that it would observe diminishing returns. The
12 first thousand dollars lost is going to make a lot more
13 difference than the \$20,000.

14 The problem is that it would, in the range of
15 observed experience, which obviously is not at zero and
16 it's not at 20 -- well, maybe a few at 20, I don't
17 know. There you're in a very flat range in terms of
18 what the data are showing you. And you can't really
19 even be sure that there is a statistically significant
20 relationship. And, if there is, it seems to be
21 fairly -- of fairly small magnitude.

22 And it also tells you, I think, that there's
23 so much else going on of a nonmonetary nature that
24 swamps the significance of the monetary variations.

25 Q. I think your answer anticipated a whole line

1 of questioning I had, which is, at some point, the
2 converse is not necessarily true. In other words, at
3 some point, decreased spending at some level will
4 result in decreased performance.

5 A. Sure. Again, to take the extreme case, which
6 economists like to do -- I gather some lawyers do as
7 well, certain arguments. If you decrease the spending
8 to zero, obviously, you're going to suffer damage.

9 And -- and, you know, and then again, you
10 know, you can also talk about specific programs as
11 opposed to general things. And, here, if you -- I
12 would draw on my experience as a policy maker in
13 Massachusetts, as well as an economist, you know, I've
14 seen specific programs that -- again, one may not have
15 the Gold Standard scientific research that says these
16 are working, but you get enough evidence from -- from
17 what you can see that -- that's a targeted program.
18 That may be a good program that you don't like to see
19 cut.

20 Q. Can we say, for example, perhaps, what we
21 call the ELL Program, which is English Language
22 training --

23 A. Right.

24 Q. -- for nonprimary English speakers, is that
25 the type of targeted program you're --

1 A. Well, I have --

2 Q. -- referring to?

3 A. -- I have in mind, for example --

4 Q. Doctor, you --

5 A. Oh, sorry.

6 Q. For this court reporter, we need to have a
7 complete record, so if I can complete the record.

8 Is that the kind of program that you're
9 referring to?

10 A. It wasn't what I specifically had in mind.
11 Again, drawing -- again, putting on another one of my
12 hats. I remember in the State of Massachusetts, for
13 example -- let me talk a little bit about the
14 nonmonetary and then segway to the monetary.

15 What I think was a very key factor in the
16 success of the Massachusetts education reforms, which I
17 think are nationally recognized, was the MKST exam. I
18 guess that would correspond to your WASL.

19 And the decision was made -- I was present in
20 the Governor's office when the decision was made by the
21 top political leaders from both parties came, in the
22 fall of 1999, to make a bold decision to make these
23 tests high stakes. Okay? To make graduation from high
24 school contingent upon them. And they bow their sacred
25 honor to one another to stay the course under extreme

1 pressure.

2 And that resulted, I believe, in -- that was
3 the driver. That was the main driver, in my opinion,
4 of the success that Massachusetts had. And you could
5 see it in the data -- I'll put on another hat,
6 economist's hat. You could see in the data the pass
7 rates were too low to be politically acceptable, let's
8 put it that way, for a high school graduation
9 requirement.

10 During the years that -- during the run-up
11 years, the trial years of this examination before it
12 counted, okay? And the decision was made the fall of
13 1999 that the 10th graders would have to pass that
14 before they graduated in 2003, class of 2003. So '98,
15 '99, '00, you had 50 percent pass rates and people
16 said, oh, my God, we're facing a train wreck. Okay?
17 And you plot these.

18 And then in 2001, the year it would count for
19 10th graders -- now, they would have subsequent
20 attempts as well -- you saw this spike in the pass
21 rate. Okay? Now, that was not a year that
22 expenditures spiked. They may have increased a little
23 bit but no more -- in fact, probably less than years
24 past. Okay? So something else nonmonetary was going
25 on there.

1 Now, I'll flip over to the monetary side.
2 There were -- these people were afraid of a train
3 wreck. There were programs, perhaps analogous to some
4 that you have here, that were -- although I think
5 smaller in magnitude -- that were aimed, specifically,
6 in getting students over the bar. Okay? So there were
7 some remediation ones. The largest it got was \$50
8 million. Okay? And the state with a million students
9 probably is a comparable size to yours.

10 And so that was used for some specified
11 targeted activities and, by all accounts, it seemed to
12 be pretty -- pretty successful. Okay? And it's the
13 kind of program that you could actually focus on, see
14 how the kids who were in these programs, you know,
15 improved in their test scores. The kind of things that
16 could be picked up, for example, in the -- in the kind
17 of activities that the data center here has specified
18 to undertake in 2261. So that's the kind of program
19 that -- and, unfortunately, it was cut in -- during the
20 last -- in 2003 I believe it was.

21 Now, Massachusetts managed to somehow muddle
22 through and still ended up with number one in the NAEPs
23 across the country. But, again -- you know, again that
24 was a kind of a targeted cut that you didn't like to
25 see.

1 Q. Do you know what Massachusetts spends on
2 their per-pupil spending?

3 A. I don't have the current figures. If you
4 asked me three years ago, I would have them on the tip
5 of my hands. The -- they -- they did increase their
6 spending by a substantial amount between 1993, when the
7 first court case happened, which was the McDuffy case,
8 although the Ed Reform Act was well underway and was,
9 in fact, signed within days of the decision anyway. So
10 it was going to happen anyway.

11 So they did set out -- I would -- if you
12 break up the Massachusetts experience in a couple of
13 different phases, I think it's constructive.

14 So they had -- they did have a significant
15 increase in expenditures from 1993 to 2001 when the
16 phase-in process was completed. And then you got --
17 but the -- and then the spike in performance for 2000 I
18 guess it was, for fiscal 2000 is when, if I'm not
19 mistaken. Then the spike in performance was when the
20 exam started to count.

21 So then you had a second phase, which was,
22 okay, now we fulfilled the requirements of the Reform
23 Act of 1993, now what do we do? We've got the -- you
24 know, we ramp up expenditures.

25 Now I would say -- again, I was there through

1 much of that period and worked closely with the
2 Commissioner of Education, the Chairman of the Board of
3 Education, obviously, as well as with Governor. And
4 when we -- we never really found any evidence that the
5 large increase in expenditures, which showed up in
6 teacher salaries and class size issues, translated into
7 performance.

8 Well, you know, there was far more evidence,
9 as I've tried to indicate, that the nonmonetary
10 factors, such as to -- making the test count plus you
11 also -- the nature of the standards that went into it,
12 you know, states have different -- have tests of
13 different quality which correspond lesser -- better
14 more or less, well, to what you'd been picking up on
15 the NAEPs. Okay? So we had very, very high quality
16 standard documents as well. There was a whole lot of
17 other things, teachers, certification tests. Teacher
18 tests that were in place at the time. These are
19 relatively small dollar things, you know, in the order
20 of, you know, single-digit millions or double-digit
21 million rather than anything larger than that.

22 So, in the second phase -- so, okay, we've --
23 we've gotten pretty acceptable pass rate on the MKST,
24 but there's still a lot of schools that are failing,
25 and so what do we do about that? So the efforts turned

1 to, really, more focused expenditures for what do we do
2 for turnaround efforts? Okay? How do we classify
3 schools as in need of being turned around, and what
4 kind of programs can we have for them?

5 And I was involved in several policy
6 initiatives to try and address that, and advised a
7 national organization that's pushing turnarounds. And
8 the key element of that -- see, this gets to teacher
9 quality as well.

10 There's been a lot of discussion here about
11 what salaries you need to attract good teachers.
12 Okay? I think salaries went up in Massachusetts. I
13 don't know that they translated into improved quality
14 necessarily. I never really saw any evidence of that.
15 But what does matter is being able to move out of the
16 classroom teachers that are noneffective. See, it's
17 hard to tell before you hire them who's going to turn
18 out well and who's not. And the issue of salary
19 attractiveness doesn't get around that problem. Okay?

20 What is far more important, in my
21 professional opinion, and I believe it's shared widely
22 in most policy makers in Massachusetts in the second
23 phase, was, how can you get these -- the leaders of
24 these schools that you're going to put in place --
25 because you'll typically remove the leader of a school

1 that's failing, put in a new leadership team. How is
2 that leader going to be able to choose who he or she
3 wants to stay and who he or she wants to leave. And
4 this gets into the whole collective bargaining law and
5 the like. That's where this focuses to -- that focus
6 turned to on the second phase. What can you do to just
7 get them some additional resources in those -- some
8 targeted resources for those failing schools, but, more
9 importantly, give them the ability -- and we're not
10 talking large dollars. But far more important were
11 these nonmonetary features, such as giving them the
12 powers they need to get the mission straight and get
13 the -- and get them to use the data that's available so
14 that the teachers can figure out, okay, your kids
15 aren't learning the quadratic equations as well as your
16 kids are. What are you doing differently in your class
17 that you're doing? That kind of thing, which again,
18 not large dollars but very focused.

19 Q. I'd like to get back to our prior discussion
20 about the point of increased dollars creating
21 diminishing returns, and the other end of the spectrum,
22 no dollars being essentially no results, no
23 performance.

24 A. Right.

25 Q. Is there, in your opinion, in a school system

1 a minimum amount of dollars necessary to create an
2 acceptable level of achievement?

3 A. Yeah, I think there is.

4 Q. How do you find that number?

5 A. Well, that's a good question. And I've
6 given, I think -- can I draw a diagram here?

7 Q. Sure.

8 A. Okay. I like to describe what we've just
9 been talking about as -- suppose there's some
10 underlying relationship between dollars and
11 performance. One might have hypothesized that it looks
12 something like this. Okay?

13 THE COURT: And counsel should be able to see
14 this also.

15 THE WITNESS: I've actually created a
16 PowerPoint slide on this for presentations I used to
17 give.

18 And, yet, they observed -- what we observed
19 is -- and you've seen the cloud, is basically in here.
20 Okay? So here, it's hard to even discern a positive
21 slope. Maybe -- and, moreover, you've got the problem
22 that you're probably below the frontier, if you will,
23 you know, what you could achieve with these dollars.

24 But, clearly, so, in this diagram, the
25 minimum dollars that you would need to -- you know, is

1 obviously going to be some -- you know, probably
2 somewhere around here. Okay? How do you find that?
3 And the answer is that, you know -- an answer is what I
4 indicated with respect to a variance on the Successful
5 Schools. Now, let's find some schools that are doing
6 pretty well, take into account the fact of the nature
7 of their student body, looking -- I mean, ideally you'd
8 get into the kind of value-added analysis that you're
9 going to be able to do with this Educational Data
10 Center, which is going to have longitudinal data sets
11 and be able to track individual students and see how
12 much they're learning year by year. Okay?

13 So, schools that are producing good value
14 added, lets see what they're spending. Now, there's
15 probably going to be a range there. Okay? And so, for
16 a minimum, which was the nature of your question, and I
17 think that's the right question, let's, you know, have
18 a look at the range of expenditures amongst those
19 schools that are performing well by this sophisticated
20 criteria. Let's not -- let's pick something, you know,
21 maybe at the 25th percentile that those schools are
22 doing, or maybe one standard deviation below the mean,
23 or something like that. That's the kind of thing I
24 recommended in the Education Next article that Mr. Emch
25 mentioned.

1 THE COURT: Counsel, you may be seated.

2 MR. EMCH: Thank you.

3 BY THE COURT:

4 Q. You compared the Massachusetts allocation of
5 expenditures from source with Washington's noting that
6 Massachusetts was greater with regard to local funding.

7 A. Correct.

8 Q. Massachusetts has a different tax structure
9 where they have an income tax; is that correct?

10 A. They do have an income tax, yes.

11 Q. And income tax, is that fed back to local
12 school districts for expending on programs?

13 A. Let me answer your question, but let me --
14 you've also triggered another point that I wanted to
15 make, if you don't mind.

16 The fact that it's very much -- and this, of
17 course, obviously has historical routes to, of course,
18 man and going before him, to the local nature of
19 schooling in Massachusetts. It was -- it's less so now
20 but it's still, I think, largely -- I shouldn't say. I
21 haven't been there in three years -- locally financed.
22 And there's a specification as to what the local
23 contribution had -- would have to be based on the tax
24 base, so on property tax base.

25 And with -- but it's still very -- before

1 that specification was put into place in 1993, you had
2 a very wide variance, very wide variance. So it's not
3 only the components, but you had very wide variance in
4 spending levels, which was really the thrust, in my
5 view, of the 1993 case, the original McDuffy case. It
6 was really more of an equity decision than adequacy
7 decision.

8 And the large sums of money that were
9 allocated with the Reform Act of 1993 were largely --
10 were, basically, equity-oriented. They did establish
11 for the first time a foundation funding level, a floor
12 level, the kind of thing you were asking me about a
13 minute ago.

14 But most of that expenditure was, basically,
15 to fill in gaps rather -- and you still, I think, had
16 probably about a third of the districts that were --
17 were already spending well above that and didn't get
18 much. That's one of the complaints.

19 So, anyways, I did want to make that point
20 with -- that the nature of the large increment that
21 took place was an equity adjustment more than an
22 adequacy thing of raising everybody.

23 So, now I've forgotten your question, which I
24 promised to answer.

25 Q. It had to do with the base for the local

1 funding of schools and whether the mass tax structure
2 which includes an income tax --

3 A. Yeah.

4 Q. -- played into that --

5 A. Okay.

6 Q. -- local spending.

7 A. Okay. So the -- so the state component of
8 the -- no, it doesn't play into the local funding, no.
9 The state income tax would be the source of general
10 revenues for the state from which the state paid is
11 allocated, which, again, levels off, tops off,
12 basically, local contributions at, you know, ideally a
13 certain uniform tax rate. At least that's what they're
14 aiming for initially, to top off everybody to the
15 foundation budget level. That would come out of the
16 general revenues which are income and sales tax.

17 Q. The last question I have is, you referred to
18 Brookline as the City of Brookline?

19 A. Town. Town. It is a town.

20 Q. It is a town.

21 A. I think I corrected myself initially. But --
22 I heard you're from Massachusetts.

23 Q. The town of Brookline.

24 A. You're from Brookline. How about that.

25 Well, we'll have to do geography afterwards.

1 THE COURT: Mr. Munich, your witness. Any
2 follow up?

3 MR. MUNICH: No follow up, Your Honor.

4 THE COURT: Mr. Emch?

5 MR. EMCH: No questions, Your Honor.

6 THE COURT: Are you asking the witness be
7 excused?

8 MR. MUNICH: I am, Your Honor.

9 THE COURT: Any objection?

10 MR. EMCH: No objection, Your Honor.

11 THE COURT: Dr. Costrell, it's been a
12 pleasure. You may step down. You are excused.

13 THE WITNESS: I raised my kids 19 years,
14 lived in Brookline. Really incredible.

15 THE COURT: Very good.

16 Well, we're at the noon hour so we'll
17 take our recess.

18 You're next witness is going to be whom?

19 MR. MUNICH: Dr. Murphy, John Murphy.

20 THE COURT: Okay. All right. Let's resume
21 then at 1:30 this afternoon.

22 Court will be in recess until then. Thank
23 you.

24 (Noon recess and change in court reporters.)

25 --oOo--

1 REPORTER'S CERTIFICATE

2

3 STATE OF WASHINGTON)
4 COUNTY OF KING) SS:

5

6 I, CYNTHIA A. KENNEDY, an official reporter of
7 the State of Washington, was appointed an official
8 court reporter in the Superior Court of the State of
9 Washington, County of King, on April 17, 2006, do
10 hereby certify that the foregoing proceedings were
11 reported by me in stenotype at the time and place
12 herein set forth and were thereafter transcribed by
13 computer-aided transcription under my supervision and
14 that the same is a true and correct transcription of my
15 stenotype notes so taken.

16 I further certify that I am not employed by,
17 related to, nor of counsel for any of the parties named
18 herein, nor otherwise interested in the outcome of this
19 action.

20

21 Dated: _____

22

23

24

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25