

What Works Clearinghouse

Education Research: Moving Evidence on What Works into Practice

Event Transcript – Friday, December 12, 2008



Opening Remarks

Mark Dynarski, vice president at Mathematica Policy Research and director of the What Works Clearinghouse

Panel 1: Building an Evidence Base: Lessons Learned from Systematic Reviews

Panelists:

Kay Dickersin, professor, Johns Hopkins Bloomberg School of Public Health and director, U.S. Cochrane Center

Michelle Bennett, assistant director, Center for Cancer Research, National Cancer Institute, NIH, Department of Health and Human Services

Jill Constantine, associate director of research at Mathematica Policy Research and deputy project director of the What Works Clearinghouse

Susan J. Bodilly, director of RAND Education

Moderated by: **Michael J. Feuer**, executive director at National Research Council

Panel 2: Strategies for Expanding the Education Evidence Base

Discussants:

Grover "Russ" Whitehurst, former director, Institute for Education Sciences, U.S. Department of Education

Robert Granger, chair of IES and president of the William T. Grant Foundation

Panel 3: Translating the Evidence Base: Disseminating Findings to the Field

Panelists:

James "Torch" Lytle, practice professor, University of Pennsylvania and former superintendent, Trenton Public Schools

Sally Kilgore, president, Modern Red School House

Marcy Baughman, vice president for academic research, Pearson Education

Mark Dynarski, vice president at Mathematica Policy Research and director of the What Works Clearinghouse

Moderated by: **James Wendorf**, executive director, National Center for Learning Disabilities

Closing Remarks

Paul Decker, president and CEO, Mathematica Policy Research

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***Welcome and Overview
Mark Dynarski***

Good morning to everyone, and I want to welcome you to the first annual What Works Clearinghouse forum. I'm Mark Dynarski at Mathematica Policy Research. Before I go on to talk a little bit about the substantive parts of the forum, just let me take a minute here and thank Phoebe Cottingham at IES, and Susan Sanchez, and Russ Whitehurst of the Brookings Institution for his long time leadership in helping the Clearinghouse emerge; Cassie Pickens, Shep Ranbom, and Rachel Bennett at Communication Works, who have helped us get this going; and, of course, the J. W. Marriott Hotel. Let me talk about the purpose of the forum. It's a first annual forum, as I've mentioned, and really, at first, we thought we wanted to just talk about some of the new things the Clearinghouse is doing, which I'm going to mention in a minute. But recently, there's been a report that the National Board of Education Sciences asked for about the Clearinghouse which basically suggested that the Clearinghouse do more outreach with other disciplines, with other scientific communities, and we thought putting those two together made a lot of sense. And so, what we've done is organized a forum that's trying to think more generally about the kinds of issues that arise with doing research syntheses and systematic reviews. And hence, that is, a lot of the structure of the panels today will be about these more general issues. Systematic reviews and research syntheses really got under way with the Cochrane Collaboration in medicine in the early 90s, and the Cochrane Collaboration is certainly the grandfather of all of these. But now, there are a lot of research syntheses operations going on. The Clearinghouse

is one. The Best Evidence Encyclopedia, Social Programs That Work, and so on, and Florida Center for Educational Research. So, this is a growth industry, if you will, but there are a lot of questions that arise in these kinds of efforts. What kinds of topics do we study? What kinds of standards do we use to review the research? How do we best disseminate the findings from the research? Are these findings having the effects that we hope for in raising the level of evidence used in decision making? And so, that's, in many ways, the motivation of our panels today, are to grapple with these questions and to look ahead to try to develop an agenda for more activities with respect to the Clearinghouse and, I hope, with respect to these other review efforts. With respect to the Clearinghouse itself, over the past 15, 18 months, we've actually expanded our activities quite a bit. We've added a couple of new kinds of products which are proving to be very popular: practice guides, which I'll talk about a little later; and quick reviews, which are intended to be assessments of studies which have recently emerged into the news, and for which the Clearinghouse is providing a sense of whether those studies meet our standards, so to speak. We have over 100 reports now on the website, many of which show positive or potentially positive results and so on. So, certainly, that set of reports has really become much richer. We are expanding into new areas. We had some areas defined back in 2002, when the Clearinghouse first got under way, and we are pleased to now be doubling the number of areas in which we are doing systematic reviews. We're now doing adolescent literacy, for example, out-of-school time, teacher professional development, high school math, learning disabilities for elementary school students, autism, and preschool interventions in special education. We are revitalizing our work in English language learning and in elementary school math as well, so the

number of research areas that the Clearinghouse is undertaking is getting much larger. Practice guides, I mentioned, also have proven very popular. We are doing practice guides on response to intervention, data-driven decision making, out-of-school time, promoting access to higher education, reading comprehension for beginning readers, and teaching fractions for elementary school math students. With that, let me talk more about what we want to do today with the forum. We have three panels. The first panel will be exploring more the conceptual underpinnings of systematic reviews. We have Kay Dickersin, who is the U.S. director of the Cochrane Center and a professor at Johns Hopkins University; Jill Constantine, who is a deputy director of the What Works Clearinghouse and who oversees our standards and research processes; and Sue Bodilly, who is the director of the education area at RAND; RAND carries out the Promising Practices Network. It will be moderated by Michael Feuer, who is the executive director of the Division of Behavioral Social Science and Education at the National Research Council, which is a unit of the National Academy of Sciences. This is a moderated question-and-answer discussion, so Mike will ask questions of the panelists, who will respond. We'll then have time for audience questions to the panel. This is being podcast and possibly webcast, so I would just ask you, please, to identify yourself and your institution, so that that will be on the record. The second panel will include Russ Whitehurst, who is now at the Brookings Institution, the Brown Center for Education Research; and Bob Granger, who is the departing chairman of the National Board of Education Sciences, who'll provide both a historical narrative about the emergence of the Clearinghouse, as well as talking about the recent National Board of Education Sciences reports about the Clearinghouse and thinking about the future. And

then, the third panel will be translating the evidence base disseminating findings, where we have Michelle Bennett from the National Cancer Institute; Torch Lytle from University of Pennsylvania, who was formerly the superintendent at Trenton Public Schools; Sally Kilgore, who is the president of Modern Red SchoolHouse; Marcy Baughman, who is the vice president for academic research at Pearson Education; and I'll sit on that panel as well. The issues really there are: how best to disseminate, how to think about dissemination, how best to disseminate, how best to work with educators in a way that promotes the effectiveness of research syntheses. It will be moderated by Jim Wendorf, who is executive director of the National Center for Learning Disabilities. We'll also have time after that panel for audience questions and answers. With that, let me turn it over to Mike Feuer, who will moderate this first panel. Mike?

Building an Evidence Base: Lessons Learned from Systematic Reviews

Moderator: Michael Feuer

Panelists: Kay Dickersin, Jill Constantine, Susan Bodilly

Michael Feuer

Thank you very much, Mark. Good morning, all. It's a pleasure to be here. I suppose that since we're podcasting, broadcasting, whatever, I should make it clear that if I express an opinion here today, it's my own and not necessarily that of the National Academy of Sciences. To express their opinion would take a rather lengthy review process [laughter], and we don't have time for that. But, thanks so much for this opportunity and for this invitation for me to actually speak for myself. This is a truly wonderful opportunity, and in so many important ways, what the Clearinghouse represents, and what this program represents, is maybe one of the most interesting and

significant manifestations of a resurgence of interest in the research community in making its wares useful in the world of policy and practice. And I can tell you that in my review of sort of the history of policy making and policy science, we've had, over the years, sort of ups and downs in the ways in which evidence has been respected, and produced, and then brought to bear on the most complex issues that we face as a society. It's so refreshing, in a world that is so obviously and, in so many places, overrun by a cacophony of ideology, and opinion, and other sources of knowledge, to see this kind of sustained effort at bringing rigorous evidence to bear on the issues that matter so much to us. So, what matters to us more than education, after all, and so, it's a wonderful way to catch our breath and think about where we have come in this so-called evidence movement. My sense is that, as much as many of us believe that rigorous evidence has a very significant place in the world of policy making and in practice, it's a concept that can easily be misunderstood. It's misunderstood by some as an effort to discredit informal non-research-based knowledge, experiential knowledge, evidence that comes from some combination of intuition and pattern recognition and prior work. When, in fact, that's not what the evidence movement either is or should be understood to be. It is about a contribution to the world of policy and practice from the findings that come from a more formal and systematic attempt to be empirical. In that regard, systematic reviews play a very fundamental role, and so the first time I heard about, for example, evidence-based medicine, it was from a very distinguished physician who had been the dean of the school of public health at a major northeastern elite university. And I said to him, "Well, this is wonderful. What were you guys doing up until now?" And it turns out that in medicine—and you'll hear about this—again, the

evidence movement can be easily misunderstood as an attempt to displace some elevated notion of the physician's sense of the patient with sort of algorithmic knowledge and an application of sort of rules that come from research. That's really not what it's about, either in medicine or, as I believe, as it could be, and should be, in education. So, getting this balance right is really part of what I hope we can probe a little bit today in the course of this conversation. I'm sitting here with Russ Whitehurst in the first row. Nobody gets more credit for actually inserting into the world of education research the notion of systematic rigorous attention to data and detail, certainly not in the last 10 years, than Russ. But I think—and I'll check with him later about this—but I think Russ would agree that his ideals about this were not an effort to displace practical wisdom, but rather, to inform practical wisdom with serious research. So, with that, I'm actually joined here at the table by people who actually know what they're talking about, which is reassuring to me, I must say. And we're going to start with Kay Dickersin, who comes at this, really, from the world of evidence-based medicine and systematic reviews in the world of health and health policy. Then, we're going to loop back to folks who work on education-related things, through Jill Constantine, and then Sue Bodilly from the RAND Corporation. Then, I'm going to make sure we have time for some good questions and answers, or at least some good questions. I can't guarantee the answers you're going to get, but I think good questions are actually a very important form of knowledge creation. So, start writing down your questions even now. Kay.

Kay Dickersin

Thank you. I want to say first how honored I am to be here because of the important work that Russ has done. I'm an observer from the outside, so I don't know in intimate detail everything that goes on, but it's very impressive to somebody who works in the healthcare field to see what's happening in education. I have to admit, we can use the education field to prod the healthcare field when we need to and say, look, it's happening over here, because I want to start by saying it's not as if all problems are solved in healthcare. But, I can tell you the challenges that we've met and how we've addressed them. I will say it when I go out and talk to people about the work we do in the Cochrane Collaboration and beyond. And I ask people, how many people here know what evidence-based healthcare is, everybody raises their hand. How many people know what the Cochrane Collaboration is or have heard of it? They raise their hand. Then I say, how many of you really *know* what we do, and very few raise their hand. So, I think there's an awareness that there hasn't always been, but it doesn't mean that the practitioners in the field really understand what's going on, and that's our challenge. It's everybody's challenge how to implement this. So, I'll start just by talking a little bit about evidence-based healthcare in the Cochrane Collaboration, and I want to echo what Michael said about evidence-based education. In this case, I'll talk about evidence-based healthcare, since it's what I know. We draw three circles, three overlapping circles, and one is the evidence because, of course, you would use the evidence as part of your decision making. And another circle is the clinician expertise. So, of course, you're going to bring your expertise to whatever you're doing. You can't leave that behind, and nobody is asking the clinician to do that. And the third circle is patient values, and the patient is also going to bring their opinion. In education, the student and

the parents are going to bring their values to the table as part of decision making. But why would you not have evidence as the foundation for decision making? I'll use my mother as an example, perhaps, as we talk, because she's sort of my sounding board. She's retired now, but she was a Boston public school teacher. She taught reading for years and years, and I heard about her work constantly, and it made me very interested in issues. But, when I talk to her about what I do, she was surprised, as any layman I've talked to since then, that evidence isn't always part of clinical decision making. Wouldn't we want it to be? So, the layperson, I think, understands this idea of evidence being part of decision making much better than the practitioners. To go and test it out, it's absolutely true. I feel confident it will be true in education as well. So, the Cochrane Collaboration is an international collaboration. We started in 1993. It was 70 people in a room in Oxford, England. It was the brain child of someone named Iain Chalmers, who had been a student of Archie Cochrane's, and he named it after Archie Cochrane. And the idea was, of Archie Cochrane's, that the National Health Service in the UK pays for everybody's healthcare. Healthcare is free. He said, that's great, but we shouldn't be paying for something that doesn't work. So, Iain Chalmers said, well, let's get together all these people from all over the world and see if we can bring together all the evidence to see what works and what doesn't. So, 70 people from nine countries, and now 15 years later, we're over 15,000 people, many of them volunteers, from over 100 countries. So, it's a lot of volunteers, and with funding, also a lot of people who are paid, who help organize what we do. I don't have time to tell you everything we do, but I think that volunteer component and the support of governments all around the world has been very, very important. We've produced over 5,000 reviews and protocols for

reviews, because every systematic review has a protocol before it's a systematic review, and they undergo peer review at every step. Also, at every step, consumers—that is, patients, people who are part of constituencies, patient groups—are involved in the review process, usually as peer reviewers or some other aspect. So, we make sure to involve constituencies from the beginning, and that is an important component of acceptance and translation into the community, I believe. From day one, we had a handbook of standards on how to do systematic reviews, and this has been updated. Now, you'll see in systematic reviews done by other groups, they'll say, "We use the Cochrane Handbook; we use the Cochrane software." And the handbook has now been published in book form. It's also available for free on the Web, so that anybody can use it. We have annual meetings where there's training, because all of us need ongoing training, and that's a very important component. We can't just think up ideas, read a book, and do a good job. We need constant training, me included, and this is my field. And so, I think those are very important components for setting the standards within Cochrane. We have what are called review groups, and those are like interest areas. So, for example, there's a heart review group. There's a pregnancy and childbirth review group, and this could be translated in the education field as well. And, we have methods groups, and those are the people who stay up to date with the methods and make sure that the standards that we set are up to date. These groups all communicate by e-mail, and we only meet once a year. We also developed, from day one, key databases that we need for our work. So, we have a database of all controlled trials and other studies that would be eligible for our systematic reviews, because not all systematic reviews have only trials. It depends on the research question we're asking.

We have a methodology database. There are other groups doing systematic reviews. It's not just Cochrane, and some of them have been mentioned. For example, the Campbell Collaboration does systematic reviews in the areas of education, social welfare, justice related to the social sciences. The Agency for Healthcare Research and Quality, a federal agency here in Washington, they do systematic reviews. I think they've done about 150, many of them related to preventive care, but also other areas. They and the CDC, who do reviews in the area of public health, I think, have had the challenge we all face of keeping reviews up to date, and maybe we can talk about that a little later. Because, if you're depending on a review from 1999, or even from 2001, is that review correct? So, sometimes it's better not to be depending on something that's old and out of date than to be pulling together the evidence yourself. So, I think this has been a challenge. The standard setting has been a challenge, keeping reviews up to date. And the last thing that's been a challenge for the groups doing systematic reviews is, I think, being self critical. One of the things about Cochrane is we started out a bunch of extremely critical people—critical of ourselves, critical of everybody else—and I think you have to retain that. As a matter of fact, there's a prize now given annually to the person who's done the most important work that's critical of the Cochrane Collaboration. I know, that sounds funny, but I think that's one of our strengths. It's part of our standard setting, is keeping an eye on what we do and saying where we're not meeting our standards.

MF: Thanks, Kay. I want to segue from Kay to Jill by asking a question about standard setting. It's remarkable that in 15 years, the Cochrane Group now has 15,000 people involved plus, and has already produced 5,000 of these reviews. And it raises a

question in my mind about standards, evidentiary standards, and the ways in which you, as an organization, grapple with the following possible dilemma, and that is: on the one hand, you want to have high evidentiary standards to be faithful to scientific inquiry; on the other hand, noticing or realizing that there's the risk that you could just set the standard high enough so that nothing gets by. This is, I think, a predicament that we face in the real world of policy, where we certainly want to bring the best available evidence to bear, but if we wait until the definitive proof comes in, we do nothing. So, I'm just wondering whether this is an issue that you deal with in Cochrane, and then, I want to go quickly to Jill and ask about whether, in the context of the systematic reviews going on through Mathematica and so forth, you're also facing the standard setting issue.

KD: This is an important question in healthcare, and an area where there's a lot of debate in terms of standard setting, as you know. I think it raises another important issue in terms of my beliefs. And my belief, and this is what Cochrane follows as well, is that the people who do systematic reviews should be skilled in that area. They should be trained, educated, and skilled in doing systematic reviews, and it would include some practitioners who can help us set the questions, and the outcomes, and the proper way of looking at the content. That said, I don't think that methodologists such as myself are the right people to set policy, and so, I believe in separating the systematic review process from the policy process and the policy people, so the systematic reviewers, it seems to me, can set the high standards. It's the policy people who have to say, "Is some evidence better than no evidence," and they are the people who are going to have to say, "There are no good studies on this topic. We desperately need them. We have to

find ways of funding the new studies that will answer the question we really need answered, and, in the interim, we're going to do something." A doctor has to do something, and they do. They sometimes make decisions based on very little good evidence. That's up to the policy people. Now, the policy people can't be just practitioners. They have to include some methodologists as well, to keep them on task and not just say, look, you have to have some standards for policy making, too. Are we going to make recommendations based on somebody's expert opinion? I hope not. Sometimes, it might happen; that is, what time should kids eat lunch. I'm taking a silly example, but there may be something where there's no data, and you just have to make a decision. So, I hope that answers the question.

MF: It certainly moves the conversation, and this distinction between methodologists and policy users, this is really very, very critical to this whole conversation. It has to do with the supply of knowledge and the demand. It has to do with the production of knowledge and its uses; and so, Jill, you're going to resolve all this for us, I hope.

Jill Constantine

Thank you very much, Mike. I also want to welcome everybody and say how pleased we are in the What Works Clearinghouse to have this interest, and we look forward to learning from efforts, such as Kay has been involved from, and as Michael says, your good questions. It's a nice quote. It's an important form of knowledge creation. That's certainly true for the Clearinghouse. I'll take just a couple of minutes to talk through the Clearinghouse's review process and how we set standards. I'm going to

do that because I like the way Kay said this; when she steps in front of an audience, I think we like to think we have the same three questions: Who knows what is evidence-based practices in education? Who knows what the What Works Clearinghouse is? And who knows what we actually do? I suspect we get the same pattern in the show of hands, except maybe a little fewer at each point. Let me talk a little bit about our review process and how we set standards, and I'll come back around to Mike's question about, can you set them so high that you don't learn anything. So, the What Works Clearinghouse's processes—I'm going to talk first about identifying literature—are built very much from established efforts, and certainly, Cochrane is one of the leading ones. The process for identifying research review is based on three principles. The What Works Clearinghouse is exhaustive, it's inclusive, and it's well documented. So, we will initially scan the research for all mentions of an intervention, and then scan the information to determine which are studies of the effectiveness of an intervention eligible for review under different topic areas. So, very much modeled after Cochrane, reviews are organized under topic areas, and there is a protocol for each area that will clearly delineate what is the scope of that review, and what's eligible for review under that area. To minimize publication bias, we cast a very broad net in searching for literature. Specifically, we do not review only literature that has come out in peer-reviewed publications. We build in procedure to unearth what sometimes is referred to as "gray literature," and this includes inviting submissions from the public, which includes developers. Developers are a tremendous source of research that may not be published. We also contact prominent researchers or research organizations in the field who have conducted research or are aware of research. We carefully document our

research process and screening. Like the Cochrane Initiative, we have very large databases behind all our searches. Using these principles, the What Works Clearinghouse has currently, and this number changes every day, screened over 7,000 studies of nearly 500 interventions. And, as Mark mentioned in his opening comments, we've produced reports on over 100 of these interventions. The What Works Clearinghouse research standards are based on a principle of identifying the best evidence on effectiveness of interventions in education. So, the standard for a study that meets standards is currently a well-designed, randomized controlled trial, or an RCT. And RCTs are currently alone in this category. Since an RCT design creates two groups of whatever you're studying—schools, teachers, students that are alike in terms of both their observable and their unobservable pre-intervention characteristics—they provide the most compelling evidence that any differences in the groups observed after one group gets the intervention is due to the intervention and not unmeasured characteristics. Other study designs are what people refer to as quasi-experimental, or sometimes matched comparison group designs. We designate those designs as meeting standards with reservations; because well-executed designs of this type create these two groups that are similar in characteristics we can observe, which provides evidence of effectiveness intervention. But, we indicate a reservation on this evidence, because we can't be sure the groups were alike on things we couldn't observe. So, that's our process and our general standards. An important aspect of setting standards revolves around that word, that phrase I keep sneaking in there, "well-executed." So, what characterizes a well-executed design? How do we know how to characterize RCTs and quasi-experimental designs when the original properties of that design maybe

weren't maintained over the course of the research? And the devil is most certainly in the details on these issues, and reasonable researchers can and do disagree on these points. I have to say, I rather like the Cochrane idea of an award for the best, most precise criticism of a work in your efforts. I think we should think about that in the Clearinghouse. But, to develop these standards, we work directly with individuals with expertise in study design and statistical inference, and we develop standards for processes that can be threats to research design, such as attrition, or how do you determine when matched groups were really alike enough. And then, we subject all those standards and technical approaches to rigorous reviews by peer reviewers and by researchers outside the What Works Clearinghouse. The principles that guide the development and the application of the standards are to make them transparent and to make them consistent. So, by making the standards accessible publicly, people can read them. And, by responding to specific questions about reviews, it allows direct input on the standards. So, we get feedback directly from the public. It allows us to revisit specific standards and approaches. And, of course, transparency and consistency allows other researchers to basically replicate our findings and do their own review of the literature and see how we came up with our findings. That said, kind of coming back to Mike's questions about the standards, of these 7,000 pieces of literature we've done, currently, just over 200 meet standards on the interventions we've produced a report. It doesn't mean all the others *didn't* meet standards. Sometimes, they just don't fall within a scope of the current areas, and as we develop, expand areas, more will fall within the scope. But, many don't meet standards. I think I want to reinforce a case point. It's not that we don't find compelling evidence on anything that works. We actually do find

evidence on a number of things that work, but I really reiterate Kay's point, which is: If we don't have any strong evidence on an intervention, that's very important to know. We need to go out there and say, "We've looked at all this literature, and we just don't have anything compelling." So, those findings of "didn't find anything that's standard yet" are critical, and, we think, important to the knowledge base. I can talk about a couple of other challenges in conducting these reviews or I can come back.

MF: We're going to have some time to double back on this. So, a number of the key phrases that I picked up from Jill here are: "best evidence on effectiveness," "most compelling evidence." There's a spirit here of, sort of, optimization; going for the best in the evidence. Now, that's a fundamental tenet, I believe, of a lot of this movement. At the same time, I think, for reasons related to the point I was making earlier, it may be rather constraining. And so, my question then, and this is my way to segue to Sue, there's a phrase here called the "Promising Practices Network." *Promising* suggests something a little different from optimal, and I want Sue to sort of take this on from the standpoint of whether, even within the supply side—that is, the methodological inventory of knowledge—scientists are aware of the need for something that would be called promising, indicative, suggestive, on the way to this most compelling criteria.

Susan Bodilly

Scientists may not be aware of that, but practitioners are. And so, let me talk a little bit about the Promising Practices Network, both how it parallels what has been discussed before, but also, how it differs. It parallels these other efforts in two fundamental ways. One is, that it looks at practices or programs, and I'm emphasizing

that because, in some healthcare situations, we're looking at actual medicine—a shot, a pill, whatever—and that can be tested in very different ways. But programs are really about changing people's behaviors to deliver a particular service in a more effective manner. And so, that gives you this human element which is much more difficult to control for, etc. So, Promising Practices Network is about practices and programs, trying to understand their effectiveness. The other thing it has in common is a set of levels of evidence and specific criteria used to evaluate research on different programs. Is it quite the same? No, and this gets to the question. And, here's why it's not quite the same; I think that's most important. The Promising Practices Network is not a government-associated entity. It was founded by four intermediary units at the state level back in 1998, and some of them are actually foundations, who dealt with child policy. So, they were interested in what works for kids. So, first, from that comes, a) It's not just about education or health; it's about a series of different outcomes for kids that practitioners and child policy were interested in. So, if you look at the website, you'll see all sorts of different things in there: cats and dogs, teenage pregnancy rates, early infant mortality rates, educational attainment. 2) Because it came from the practitioners, they were interested not just in the very best, but in what was proven, what was promising, and what was, sort of, at least on the radar screen, coming up. And so, the website and all the information in it, the levels of evidence, are very clear as to which criteria are passed by these particular things. And, that helps from the practitioner's point of view. When they can't get the best, for some reason, cost, whatever, they can at least get promising. In addition to that, very unlike the What Works Clearinghouse, because this is a network that's grown over time and it's practitioner driven, it never went into, say,

let's look at reading in the third grade—specifically, vocabulary acquisition—and figure out what program works for that; look at all the evidence and say, the three that work for that. Instead, it's actually sort of a bottoms-up, practitioner-driven network. So, people propose a particular program to be evaluated and submit it, and then the network, its series of reviewers, work in that way similarly to these other things, but not looking at a whole area, just looking at a single program, a single set of practices, what the evidence is, and then putting something up to the website, saying, this is at one of these levels, here's why, blah, blah, blah. So, rather than coming out with a big report on what works in reading, vocabulary acquisition in the third grade, it's this much more fluid and organic development over time. So, you can go in and look at reading achievement, but it's all over the place. It has middle school, it has high school, it has blah, blah, blah, lots of different programs that are proven, lots that are just promising. That leaves it to the consumer, the practitioners, to really do a bit more work in terms of understanding what they might use. They have to go in, and they have to look at these things, but I think it's presented in a much more digestible fashion. So, while it has parallels, it also has distinct differences, all coming out of being driven by the practitioner intermediary organizations and looking for ways to get, as fast as possible, good, solid information to the practitioner consumer about what appears to be working in their field on certain types of outcomes.

MF: Fascinating. I confess to be very moved by this conversation. I mean it. This is very cutting edge stuff. Even at the National Academy of Sciences, we don't necessarily have conversations that get into this kind of depth and sophistication quite this quickly. Questions, or should we have a little more exchange here? Are there

people who want to get into this now? That's perfectly fine. I'm only going to ask that you ask a question and hold off on your sermon until the inauguration. [laughter]

SB: Michael, I'd like to throw just one more thing out there. You haven't asked us—Kay talked about limits, and I want to talk about just one major limit of both the What Works Clearinghouse and the Promising Practices Network. Because they are so focused on programs—usually what a teacher would implement, or a physician would implement, or a guidance counselor would implement—because they focus on that, they miss a broader spectrum of reform. They're about practices and programs and identifying ones that work. And, I think, 10 years from now, we'll have a great library filled with what works in those areas. But, that will not enable, in and of itself, reform. So, a lot of what we really need to understand is, how to get these programs in place, how to sustain them over time, how to ensure that teachers are supported to really use these practices, and that's a missing ingredient in this approach. So, it's not—I want to make sure people understand, I'm not criticizing us doing this, I think it's an important step—but it's only a small step in terms of understanding the infrastructure that needs to be put in place, so that people can actually use this information effectively.

MF: While you're gathering at the microphones, I think Kay and Jill want to comment on this quickly.

KD: We had a list of questions, and I just marked five that I'd like to just say some words to, just because I think we haven't said them yet. The first is that, why do systematic reviews at all, instead of what we know is true in our heart? People can be harmed by wrong or insufficient data, and so, just to take a single study or what we were taught means that it's possible somebody could be harmed. So, that's why to do

systematic reviews. Also, it's a wasteful use of resources to just keep doing the same study, sometimes not very well, and not reviewing what we have in hand and then making a decision about what's needed next, including more research. I think also there's the question of, what does it mean to be a leader. So, if the government is taking leadership in education, as they are, then to be a leader means they have to produce something that the public can trust. And, by setting standards and doing systematic reviews, this is part of that leadership process. So, I think not to do it would be a huge mistake or to do it in a half-baked manner.

MF: Got to love that podcasting. [laughter]

KD: I want to echo what everybody said, is this translation of knowledge, knowledge translation; it's fine to do the systematic review, to make the guidelines, to make the recommendations, but if we can't translate that in the classroom—and that's been the hardest part in health—then we just have to put more resources there. Because, it's fine to produce this stuff, then it's just academic if it can't get used. And then finally, in terms of lessons for our work for education, our work in healthcare for education, the first is, it's often tempting not to take the high road, to say, okay, we'll accept this lesser evidence because it's there, or I know the people who did it, or we have nothing else. Take the high road. I'm always grateful we took the high road. Take the high road. Set and stick to standards. Involve a cross section of disciplines. Involve everybody who wants to be. Don't just say, there's only one group doing systematic reviews. Find a way to work with the groups that you even disagree with, so that together, you can build standards, consistency, evidence. You're all working on the same topic, you all have the same ideas. It's very tempting to have these silos, but try to

work together. Educate, educate, train, train. Stay up to date, because even the most well-meaning people cannot do this on their own, and set the standards to minimize bias. And then, finally, work with journal editors. Journal editors have to be part of this whole process.

JC: And I want to make one additional point about the role of setting high standards. Not on the dissemination-to-practitioner side; we're going to spend a lot of time on that in the second and third panel. The other side, the dissemination to researchers. Setting these high standards have been critical for demonstrating to the education field, this is it. These are the design that provide the most compelling evidence of effectiveness. So, pushing the standards out there, so that researchers can respond and bring up the bar for their own research, is critical. I'm going to make a statement that is not based on a systematic review and would not meet What Works Clearinghouse evidence standards. But, we see more studies since 2002, when we do our reviews, meeting standards certainly than before that. And so, that's a crucial part of this feedback process, and I think we want to house it in this session. So, that's the other reason to aim high. People need to know, researchers need to know, what they're shooting for.

SB: I agree in general with what Jill just said, but I'd like to make maybe a too-arcane a point. While the methodologies have clearly improved over time by going to this process, they're still based on test score data as the outcome. And, we have to sit back, really, at some point in time, and question really what these test scores are telling us. In the medical profession, they might have more obvious and clear indicators. Either the girl got pregnant, or the girl didn't great pregnant. The kids are using drugs, or

they're not using drugs. But, test scores are a bit more difficult to interpret. We oftentimes don't know if the intervention actually improved other factors or other types of achievement that were not measured, etc. So, you know the argument. I'm just saying, yes, I agree with what you just said, but it all presumes that the test scores are measuring what it is we want, and that's a major assumption to be making.

MF: So, two very important footnotes just now; one on the relationship between research and practice, that it's not a one way from research into practice, but that, in fact, the research community has a lot to learn about its own methods, its own science from, what I suppose Lee Schulman and others have referred to as, the wisdom of practice. So, somehow getting this as a bilateral agreement of sorts is worth thinking about. And the other point here is, of course, one that I've already now slipped, so, let's go to the first...[laughter]

My name is Arie Sherris from the Center for Applied Linguistics. I'm interested in all three of you talking a little bit about to what extent the studies that feed into your reviews are from other languages in other countries, and if there's any discussion in your three organizations to increase that, to build it out, to take it a little bit beyond the English-speaking world. I know that a lot more studies are produced in the English-speaking world than otherwise, but still, are you looking there? Are there discussions to look there? And then, just relating to Susan's last remark, I would really be interested in knowing where the discussions in each of your groups go, because I saw Kay going no, no, no, it's not so simple in medicine either, it seemed, your gestures or your facial expressions. So, I'd like to hear a little bit about that and how you conquer that testing issue. Because, as a linguist, one of the problems, of course, is, in a science exam that

kids would take, would be, what extent is Juan failing the science exam, this standardized, psychometric exam, because of language and to what extent because he doesn't know science.

MF: Thanks. You know what I'm thinking here: maybe we'll tee up a few questions and then get back to them, so that we can hear from people before we...

Sarita Brown, Excelencia in Education. The empathy is very high, and I'm going to display that by giving you our tagline: Applying knowledge to public policy and institutional practice. So, we are delighted with this conversation. We didn't plan this, but my simple one was, what works for who, because in terms of the arc of this whole strategy, the reality is, that you have decision makers, whether it's in policy, as we've distinguished, or institutional practice who, every day, have to make choices. And, for the company that we keep and the focus that we have, the dearth of information that has held up to your standards that can speak specifically to what do people in the domain that you focused on, which is K-12, the domain that we focus on, which is post-secondary education, what is it that people can do to accelerate Latino students' success? So, even as we wrestle with very difficult questions and refine these strategies, what works for who?

MF: Thank you, Sarita.

Hi. I'm Jerome Dancis, I'm a retired mathematics professor. I have a few questions or comments. One is...

MF: Pick your favorite one, because I want to get back to the conversation.

One is, do you also have a list of worst practices? And, there is a particular textbook which has a track record that half the students that have studied from it, and

they show up in college, they need remedial math far more than others. And, a related thing: mathematicians know that the best elementary textbooks are from Singapore, and there may not be hard data in the United States, but there is international data.

MF: Three very interesting questions, I think with some overlap. One, having to do with language and the extent to which these kinds of reviews are sensitive to linguistic considerations. Related to that, Sarita's question, having to do with, how does this knowledge that's being created, and synthesized, and then disseminated through these review processes, actually affect different organizations, groups, for whom. That's a very nicely phrased question. And then, of course, there's the problem of what to do about evidence of things that we know, we think we know, are not working, and how does one introduce that into the mix. Who wants to take this on?

KD: I will take all three.

MF: Good. [laughter]

KD: The first one: the way I interpreted that question was, do we look for evidence that's written in all languages from all countries. I hope I interpret that correctly. The methods that we use in the Cochrane Collaboration are all evidence-based methods. As I said, we have a methodology group. We meet annually. We prepare articles and collect other people's articles that support our methods. The evidence shows that there's not overwhelming evidence, but there is pretty compelling evidence, that authors in other countries, at least in the field of health, tend to publish their negative results in their native language and their positive results in English. That's serious. If you're interested in health, you want to get all languages, and our standard is to search all languages, all databases, because PubMed, which is our standard

database here in the U.S., does not contain all 22,000 medical periodicals that are out there. It contains more like 5,000. So, we do include more than English, yes, absolutely, and our other methods are evidence-based as well. In terms of worst practices, I guess, the only thing I really want to say there is you will get that result—what works, what doesn't work—when you do your systematic review, and that should be reported. What is a difficulty here is that, when you're looking at individual studies, what doesn't work isn't always reported, or publication bias. And we have good evidence, very, very good evidence, that not only are not all studies published because they had negative or harmful results, but outcomes are changed in a report based on whether the results are positive or not. So, if you look at protocols, we're just completing a study, some drug company studies that set out to look at one outcome, a pain outcome, and you could see that from the protocol when you look at the publication. In fact, that's not the outcome they published, because they had negative results for that outcome. They publish their positive results. It's my understanding that many of the studies in education are funded by industry, the groups making the products that are being tested. And so, this might be something that you might want to do research to see whether there is a publication bias problem that could influence your systematic reviews.

MF: Jill?

JC: We have the same answer to worst practices. You would see it in systematic reviews, and we do occasionally have a report on something that showed no effect, or actually negative effects. But I'm sure we're subject to the same issues that Kay mentions. We try very hard to search non-published literature, but just hard to know what things never saw the light of day. A little different answer to the "do we include

studies from all countries:” since the Clearinghouse is an effort to bring information to K through 12 educators, largely in the United States, that does differ by protocol. So, for example, in reading, we will include studies from other countries if it’s about teaching English, in that that’s what we’re focusing on, reading in English in the United States. But, for example, our dropout prevention area did not look at programs outside the U.S., with the notion that the school structure and dropout and what it means. It just may be too different in other countries. In terms of what works for whom, you will need to...Within the reports, you can read and see what groups were covered, what was that study about. But, it’s true; certain groups may not be reflected in which studies happen to meet standards. We do have some areas that focus on particular groups, so English language learners is about students learning to read English. So, you would have more, perhaps, Latino and other types of students covered in those studies. But, it is something you have to read and try to get the context and see what groups were covered.

MF: I think in the spirit of moving things along here; Sue, unless you want to add a quick footnote to any of this, I’m going to try to adhere to the standards that have been set by our leaders here. I hope this has been...

MD: It’s been fascinating. It’s a great discussion. It’s a great kick off. Thank you very much, Mike, for moderating the panel. I want to thank the panel for some very good discussion. [applause]

Strategies for Expanding the Education Evidence Base

Panelists: Grover “Russ” Whitehurst, Robert Granger

I keep getting backlash from Capitol Hill and other places about What Works Clearinghouse. To me, it may be a matter of branding, that the term “What Works” implies something different than what is actually going on inside the Clearinghouse. Have you given any thought to maybe changing the name or trying to represent it in a different way?

No. I think it’s a great brand name, frankly. So, were anybody to ask my advice, it would be that the issues here are not branding issues. They are something else.

M: Could you identify yourself, please?

I’m Sally Kilgore with Modern Red SchoolHouse and a former researcher and now a practitioner. My concern is that we’re missing the CDC of education, which is to say that, we look back historically on health and the longevity, people’s life expectations. We have to consider the fact that public health practices were actually much more important than, let’s say, administration of some drugs in exotic diseases and things of this nature. And, in a sense, CDC is kind of the modern incarnation of that, and it really carries a lot of weight, I think, in that very gray area where we haven’t been able to get those randomized trials. And yet, we have epidemiological data that both informs future research, but can allow people to start making some adjustments in practice. I wonder if there is a vision for either What Works Clearinghouse to be the CDC, whether we think there isn’t a need for a CDC, or whether that’s a different kind of institutional structure that might be needed in education.

M: You want to take that...

RW: We had a very entertaining presentation at the last IES Research Conference, in which the presenter recalled a paper presented in 2001 by a leading epidemiologist saying, “Epidemiology: Should we call it a day?” And the point was, that so many of the findings from epidemiology with respect to health have been overturned by randomized trials, that you have to have a certain amount of skepticism about the actionable conclusions that can be drawn. That said, the IES practice guides explicitly incorporate correlational data of the sort, and that is the basis for epidemiology. And, I think, there’s a role for that when you have nothing stronger. IES funds a national R&D Center called CALDER which uses longitudinal data, which is epidemiological data in education and generates a large number of papers and policy recommendations that flow from that data. So, there’s certainly a role for epidemiology in education, and we need to be cautious about it, as people have come to be cautious in medicine about it. But, it can certainly generate hypotheses, and it’s better than blind guesses in most cases.

RG: I think that this is a very important dialogue. It’s the kind of conversation that ought to come on around admission of the Clearinghouse. Because, in many ways, form has to follow function, right? As the panel said, and as most of us now understand the What Works Clearinghouse, it is an attempt to try and tell practitioners about the warrant of the information about particular replicable educational interventions; curricula, typically, or other fairly tightly wrapped things. It is not an attempt to try and answer or provide the empirical information on broader policy swoops. For example, what is the literature say about the efficacy of social promotion or not? What do we know about XYZ? And it doesn’t, by design, try and look across these interventions at

this point. And, if you have a group of them that seem to be efficacious, try and, through correlational analysis, deduce what the active ingredients were within those various interventions, and try and make some statements about how you add all of that stuff up. Now, my own view, and maybe Russ's, too, is, if you had enough of a body of empirical work that you could do that responsibly, that would be an aspirational goal that we'd all love, right? But, when you go there, and you find we've got three studies that found effects, or three studies that you can trust in a particular area, you, then, are really exercising in a world of sort of "make-a-believe," as my kids used to say, about what kinds of practices would account for things when you've got an N of 2 or 3. So, that's the frustration here, and it's a very different world. It's an FDA model, as opposed to a meta-analysis model that tries to look across a whole body of work. I know that the panel, many of whom had background in that larger research synthesis exercise, had a hard time trying to get their heads around this sort of FDA intervention. But I think in part that's a prisoner a) of what many practitioners want to know, and b) just the amount of work that's out there on these various things.

RW: I would only add to that, the initial mock-ups of the Clearinghouse were not about branded products. The initial mock-up was about homework. Was homework a good thing? And so, the mechanisms here can certainly be extended more broadly than they have been to include practices, as well as particular interventions. My guess is that they will be.

M: Thank you. We have time for one more question.

Hi. My name is Cecilia Orphan, and I work for the American Association of State Colleges and Universities. I actually wanted to comment on the last question. We

recently got a FIPSE grant to found the voluntary system of accountability, and, as ed associations, we are really interested in monitoring and creating accountability standards on our own. We don't want government intervention, but it's very helpful to have these best practices. So, I think that's probably true for most educational bodies. They're more interested in using the associations to help bring up their standards. I actually have a question. We are really interested in remedial math, because we see it as a huge barrier to success and retention in college. I was wondering if you had any studies that you had produced that would be helpful to us. We're looking for best practices and models. Thank you.

RW: I would recommend that—it's on the record now, and you've got the director of the Clearinghouse sitting up here—so, while the Clearinghouse is focused on K–12 issues, there's no reason that it has to. And, clearly, in the broader policy community, if you look at Secretary's Commission on the Future of Higher Education, the recent Gates realignment around community colleges, what's likely to be a focus of the Obama administration, I would guess that the future of the Clearinghouse includes the coverage of issues that are important to the post-secondary community, including remedial course work.

M: Thank you very much, Russ, Bob. I appreciate it very much. We're going to take two minutes just so we can switch panels. [applause]

Translating the Evidence Base: Disseminating Findings in the Field

Moderator: James Wendorf

Panelists: Michelle Bennett, James Lytle, Sally Kilgore, Marcy Baughman, Mark Dynarski

MD: I want to introduce the panel. I want to make a few theme remarks and then turn it over to Jim to moderate another Q&A session. And then, we can hopefully go to questions and answers from the floor. This is about translating evidence and disseminating findings in the field. We're joined by Michelle Bennett, who's a deputy director at the Center for Cancer Research; Torch Lytle, who is a practice professor at Penn, and, as I mentioned, former superintendent of the Trenton Public Schools; Sally Kilgore, president of Modern Red SchoolHouse; Marcy Baughman, who is the vice president for academic research at Pearson; and then I will make just a few comments here. I'm sorry, and Jim Wendorf, who's executive director for the National Center for Learning Disabilities. We've heard a repeated theme here throughout the morning, and Bob reinforced it, that dissemination is our next big frontier for the Clearinghouse, and perhaps for other entities doing systematic reviews. I want to frame a response to that in terms of our recent experience with practice guides. Just for those who haven't visited them, an *intervention report* talks about something, like "the Check and Connect program reduces the dropout rate by X percent according to a couple of clinical trials." And that's essentially the information which is disseminated through those reports. In contrast, a *practice guide* will say something like, that "young people at risk of dropping out should be assigned an adult advocate." Well, that's the key element of Check and Connect, but what we've done in that practice guide effort is, we've unpacked the pieces of Check and Connect and other approaches that are successful in reducing

dropping out, and we've re-packaged it as an actionable step which an educator can take to help young people. So, this was, again, Russ's idea, and the seven practice guides we now have— we took a look at this earlier in the week; we have seven practice guides, we began releasing them about 12, 14 months ago—have now been downloaded more times than the entire set of 100 intervention reports. So, educators are clearly voting with their clicks, if you will, about what kind of information they like. And we're talking about a practice guide. These are going off the website at the rate of 5,000 or so a month. And so, there's just a tremendous appetite, but think about the difference. The difference is, that the evidence is being packaged in a way that actually relates directly to educator behavior. Taking that as a model, thinking about that that as, okay, so if we go in these directions, essentially the market is telling us that certain things we are doing are being welcomed, what we want to do is use that as an opportunity to think about what kinds of directions we may want to go in the future to further that kind of dissemination. So, with the first lesson, I have four points here; one is delivering research findings in a way that educators value. We can argue extensively about the science, and Russ pointed out about all the ways in which the science at the outset is tremendously difficult to break through, and ultimately yield a model of a report that satisfies all the scientists that it's somehow right or appropriate. But, in a sense, the practice guides just transcend that, and they say, let's just move beyond the science. Let's not get it wrong, but let's move beyond it and say, what should we actually do with it. So, this notion of arguing scientific subtleties, we have to keep it in the right perspective. It very much risks arguments about the best way to push on a string, and you really need to worry about the other end of the string here, and that's what we're

trying to do. The second thing is that, we hear a lot from educators that our reports—not the practice guide, the intervention reports—they don't provide a lot of detail about the practical realities of implementation. They yield evidence, but, for an educator, that's about half of the step of deciding what to do, because the rest of the "what to do" is about, are there specific resources that are required to do this? Are there special kinds of staff that I need to have trained? Is it an expensive undertaking? Are there substantial upfront costs? All of these are the kinds of issues we need to wrestle with, I think, more, so that the intervention reports don't become a factoid and devoid of a real context. The third point is that, we need to pay more attention, I think, to how research is actually used within school districts, and state education agencies, and constituent organizations. And by this, I mean, it's filtering out. We know there's 50 or 60,000 hits a months of various kinds of information coming off the website. The Clearinghouse ultimately is a website. What we would very much like to know more about is the way in which this information is filtering into networks, and exchanges, and discussions, and down ultimately into teaching practices and instructional practices, because that's really paydirt here. And, we just don't know very much empirically about what is happening with these channels. But, knowing more of that could probably do wonders for sharpening the methods of delivery. Then, the fourth point, growing from that third is that, we need to think more about avenues for dissemination, because teachers and educators very much come to trust certain kinds of organizations, or journals, or entities who are giving them information. They are often touching with the association for a supervisor in curriculum development, or the *Delta Kappan*, and so on, and we want to work more with these organizations, because the human element of that trust is

something we need to respect. It's not quite so straightforward to trust a website to just
Epidemiology: Should we call it a day?" organizations who, if we're working in
collaboration, I think, can help move the entire enterprise forward quite a bit more. Let
me stop there and turn it over to Jim, and we'll have the Q&A from here.

JW: Good. Thank you very much, Mark. I was one of several people brought in
about a year ago to offer advice about What Works Clearinghouse. We logged in some
criticism, a few incendiary devices, things like that. So, apparently, it wasn't so awful
that I was not invited back. So, I appreciate that. It's good to be here. We've had a
terrific set of discussions up to this point. I think in this panel, you're going to see some
connectivity to what's gone before, and I think the theme that we're getting at with this
panel is connectivity. What Mark has said, what we've heard before, is put a focus on
not just the kind of content that's been developed for the Clearinghouse, but now
increasingly, how to connect that content, how to deliver it, how to embed it, how to
make it come alive and be used in practice. And that is as tough, if not tougher, than
what we heard Russ discuss about actually getting the house in order and setting up the
content in ways that made sense for science. What I see on the site right now is, it's
much more productive. There's diversity in products that, of course, wasn't there before.
There's more attention to hot button issues that matter to practitioners. I'm pleased to
see that general education, special education, compensatory ed, are each referenced,
included, but not so far, and I hope never, in a way that puts them in silos, because I
think that would not work at all. I think what we're now ready to discuss is really what
the user's experience is of the Clearinghouse and how we move the content to them.

So, let me start off with Michelle. If you could give us background on what the National Cancer Institute is doing and the translational research that you've put in place.

Michelle Bennett

I just want to say it's a real pleasure to be here and to be able to share some of the things that the National Cancer Institute has done around thinking about translational research. Actually, when I talk about translational research, I think we really think about it in a couple of different ways, because we talk about making discoveries at the laboratory bench, so scientists working in the laboratory. And, how do you get those discoveries to the point of the clinical setting, and we really talk about that as being the translational research. Then, the next component is what we might refer to as research translation, so taking evidence-based research findings and then translating those into practice. So, in the context of translational research, I'll just share three examples with you from the National Cancer Institute. The first one is most near and dear to my heart, and that is, the Center for Cancer Research, which is an intramural component of the National Cancer Institute. And that means, we do research on-site at the National Cancer Institute. This Center for Cancer Research focuses on basic research all the way into the clinical setting. I joined the Center for Cancer Research in 2002, and that was one year after its formation. The Center for Cancer Research was actually formed by merging two different divisions, the Division of Basic Sciences and the Division of Clinical Sciences, and that was a very purposeful merger, and the idea behind that merger was to get the basic scientists in closer proximity, and talking, to the clinical researchers, the clinicians who were taking care of patients. So, part of my

charge when I came to the Center for Cancer Research was to help put in place programs and initiatives and cross-cutting organizational structures to facilitate conversations among people who have different expertise, in order to facilitate that movement from the laboratory bench to the clinical setting. So, we have about 50 laboratories and branches within our organization, 250 researchers doing research in their laboratories. So, what we needed to do was create things that we called faculties, working groups, centers of excellence, that really drew from across the organization, brought people together with a common mission, a common goal, a complex problem that needed to be solved that no one person could have solved alone. You really need the epidemiologists in the same room with the basic scientists, in the room with the clinicians, in the room with the people doing the animal research, etc. And putting all those people together, I think, we've got a number of really dynamic examples of things that could never have been done by any one of them alone. So, that's one example within our program. The second example that I'll share with you is in the context of the broader National Cancer Institute. It's an activity that's called the Translational Research Working Group, and this is an entity that was formed in 2005 with the express goal of improving the health of the nation and cancer patient outcomes. So, basically, what the National Cancer Institute wanted do was to determine what is its translational research portfolio. So, I mentioned the Center for Cancer Research as being research on-site, but, as you may or may not know, the National Cancer Institute funds research across the nation at academic centers and institutes. So, what research is NCI funding nationwide that addresses this translational research, and how can that be accelerated? It went through a multi-phase process. First of all, was to evaluate the current portfolio.

It brought together a panel of experts from across the nation to evaluate the portfolio, to identify what its strengths were, what its weaknesses might be. Along the way, this process was incredibly transparent, and, at multiple points along the way, invited public comment and public input. And, in the end, they came up with a model that they thought would be useful and an implementation strategy. Part of the goal is to try to harmonize translational research activities and get people really speaking the same language about what's required to move something from the basic science setting into the clinical setting. And so, in this context, I'm really talking about that aspect of translational research. It was actually just a month ago in Washington, D.C. they held their first annual meeting, where they invited translational researchers from across the nation to come together. They broke them out into groups, where they presented their research findings and sort of challenged them not to have a typical meeting where you just talk about what research you're doing, but what are the connectivity's. How can we work together? What do you have that I don't have? And, how can we actually take all of these pieces, put them together, and move them into the translational setting, get them into clinical trials. And the piece of this that's very distinct from how things have worked before is that there's a little bit of incentive behind this, in that the National Cancer Institute really wanted people to identify what are the most promising activities, the most promising research areas. And those, then, might have the opportunity to actually be funded to move them forward. And so, this is the beginning of a process, beginning of a dialogue, that I already think has had substantial impact. The last example that I'll just share with you very briefly is really that research translation. So, once you have an evidence base, how do you move that out into practice? And we have a very nice

example of this that the National Cancer Institute calls Cancer Control PLANET. If you go to the Web and Google “planet” and “NCI,” it will come up. What you’ll see is that, this is a portal that’s been made available to cancer control health staff in any place, somebody who’s been charged with setting up a program. It might be a screening program. It might be some sort of cancer control program. But, the idea behind this website, this portal, is that it gives you a number of steps. First of all, it enables the person that goes in to assess what are the challenges in their particular area. So, if it’s smoking, what are the smoking rates in their state, within their district. It also provides information about people who are already working in that area in their region, so who, a priori, could be partners in setting up or developing a new program. A third, very critical component is something you actually heard about in the first panel, and that’s the systematic review. It gives very concrete information about the background of the area and the evidence that exists for why you would want to make a change or a difference. The next aspect of the portal site enables you to download or to look up evidence-based programs, so, what programs are out there have been implemented. They’ve actually been evaluated and scored for how effective they are, so people can consider them in developing their own model. And then, some guidelines around planning programs, and then, for evaluating them moving forward. So, I know that was a lot of information in a really short time, but I hope it gives you a little bit of a sense of what a couple of the programs NCI is involved in.

JW: Terrific. Thank you very much. Marcy, you’re active in conducting studies of effectiveness. And, as you look at the biomedical model that we just heard Michelle describe, what kinds of connections do you see with education? And specifically, as you

look at practitioners and how they're using the knowledge that's coming through the pipeline, what would you say characterizes their approach to it and their usage of it?

Marcy Baughman

The first thing that I would say where there is a similarity is, Michelle was talking about having to take the findings that you get from a clinical study and making it appropriate for a larger population of users. And, in the field of education, I find that implementation and best practices are very well identified when you're doing clinical studies, but it can become difficult to disseminate to the average user. So, for example, if I'm doing a study on the effectiveness of a program, what would naturally occur during my time spent with the teachers is, we may have prescribed a certain way to use a program based upon author recommendation. But the reality of the classroom, the reality of the settings, the reality of your students, has not intruded, but it has come to reality. And, so, therefore, our recommendations will change over the course of that period, and they will then be reported in our findings. But, they're not necessarily brought to the forefront, because the intention of the study was effectiveness. So, what we're trying to do is find ways to share that information with practitioners, so that they cannot have the same frustrations, perhaps, that our first year users have with the program. In addition, the second question was focused on how they...

JW: Knowledge exchange, and are you seeing evidence that practitioners themselves are adding value?

MAB: Right. And they absolutely are. I am finding that, until a teacher or an administrator uses our program, it is simply the ideas are existing in a black hole. And

the reason I say this is, specifically, in my work over the past year, we're working on an IES-funded study on a middle school math program that has more of an inquiry-based approach. And, when I came into the study, my thought was very clear in how this program should be implemented, the professional development that should be associated with it, and how the teachers and the students would respond to it. What I've been finding is that the practitioners are telling me what is actually happening, how it is working, and the professional development they need. So, I've been running along behind them trying to tweak, adjust, and modify everything to better suit their needs. Next year, of course, will be a much better year for us, and the new teachers will have learned from their predecessors. So, the practitioners really are informing, every step of the way, how we should move forward with the development of programs, with the modification of programs, and ultimately the implementation.

JW: Any lessons there for the Clearinghouse?

MAB: For the Clearinghouse, as far as the dissemination of results, what we're learning, and I had this conversation with Mark, and he said it was a little painful, is that in some cases, it's become a checklist item to say that a program is research-based or has evidence of effectiveness. And I say it's a checklist item because I specifically have, and they're usually moderate to small size districts, the districts who will, on an RFP, say, have you been approved by the What Works Clearinghouse. And so, where that becomes painful to us is, in most cases, we have to move forward with a very tightly rigorous, usually randomized controlled trial study of a program's effectiveness during the first year of publication. What I should be doing that first year of publication is more research around how does the program work, how does it best fit certain learners, how

should it be implemented. But instead, I'm racing into a randomized controlled trial to prove effectiveness. So, when it becomes a checklist item, it loses its value and its authenticity with the practitioner, because they're no longer getting the benefit of all of the research that should be done before moving into an RCT. For the larger districts who perhaps have their own research and accountability office, they're borrowing language from the What Works Clearinghouse, and I'll call that Houston independent school district, in particular, because they have a very interesting model where they have pulled questions from the dyad, which Russ had brought up earlier, and they have incorporated directly into their RFP, so, in some cases, extremely appropriate, and we're glad for it. In other cases, we're struggling because, again, it's a brand new program, so it may not have even had one year of publication yet, and you have to provide evidence of effectiveness with a randomized controlled trial. So, it is literally impossible to meet the expectation.

JW: Thank you. Torch, you were superintendent, you are recovering practitioner. When you were at Trenton, you implemented all sorts of research-based practices. What can you tell us about what districts have to do to step up to this? What kind of leadership do they have to show? Where are the decision makers? How do you make it happen?

James "Torch" Lytle

I think I'd like to answer the question backwards. I'm glad to be here speaking on behalf of all teachers and principals in the United States. [laughter] I think the assumption that teachers aren't spending time considering evidence is not true.

Teachers are spending an enormous amount of time considering evidence. The problem is that, the evidence is state assessments, local assessments, and benchmark tests. And, when you're finished with that conversation, then you go to the next meeting, which is, how do we write the IEP for this special needs student, and what is the data that we bring to bear on writing that IEP, even though I am having some classroom management problems, and I would like to implement the new positive behavior system in my classroom, which would then lead to a "single school culture." This is a product, if you don't know it. Single school culture is a product. In order to do that, I would need a great deal of coaching and feedback. Who's going to come into my classroom and actually teach me how to do this, especially around classroom organization, changing my own teaching behavior, interacting with my students differently? And, if I make classroom climate my priority, am I undercutting my efforts to improve mathematics teaching in my classroom? I think you get the drill. Now, every once in a while, I get to go to a grade group meeting maybe once a week, or a department meeting if I'm working in a high school, but those have now been hijacked by the discussions on evidence and everything else. So, where is it that I'm going to think about how to teach remedial mathematics? Well, underneath it all, that's the question we are trying to work around. I have some opinions on this matter, as you might imagine. [laughter] The first is bringing the answers to educators. Now, you'll notice there's a valence to that statement, and the valence is also represented in another statement, which says moving evidence on what works into practice. Now, I would like to contest the valence, but I'm going to get some help from Tony Bryk in doing so. In the process, I would like to pose a medical question, and the medical question is, we know that hand washing

dramatically reduces infection in hospitals. That is, if doctors and hospital staff consistently wash their hands before they interact with any patient, the level of infection goes down dramatically in hospitals. And yet, infection control continues to be a very difficult problem in hospitals, because employees do not wash their hands. Now, this would seem like a rather simple thing to implement, but it doesn't happen. So, if you want to talk about a translation problem, that's about as direct a translation problem that you could imagine. It's a nice way to think about, why is it so hard to get teachers to translate something somewhat more complex than washing your hands. Now, having made that gratuitous comment, [laughter] I was intrigued with a conversation about the Promising Practices Network in the first panel, because I think there are counterparts emerging in education. But if I ran the What Works Clearinghouse, I'd be nervous about them. I'll give you two examples. One is Teach for America. If you don't know it, essentially it's a religious group. [laughter] I teach that Teach for America group every semester right now. And I kept asking them, why don't you guys have a network in which you pool all of the kinds of experiences, lessons, units, and so on, that you were generating in your work, because TFA didn't have it. Well, guess what? This last summer, TFA put in place an aggregation network that allows all their core members all over the country to contribute lessons and units. Now, as to the quality control, that's a whole other matter. My daughter works for an organization called Curriki. It's underwritten by the founder of Sun Systems, so it has a lot of money behind it. It is meant to be an open source platform that teachers, or districts, or schools can use essentially in the same model of TFA. That is, they can contribute units and lessons and so on, and they begin to be accessible nationally. It is literally a Wiki in the manner of

Wikipedia, except it's a Wiki designed for teachers to essentially share their work. And in the manner of Wikis, the credit you get is as a contributor to the Wiki. It isn't because this is a research-based contribution. So, the real issue, I think, for dissemination is, whether these sort of teacher networks are going to move so fast, they're going to leave What Works in the dust someplace. And, how do you bring the quality side into the Wiki side, would seem to me to be the question of the moment. I said earlier that I was going to call on Tony Bryk to bail me out. You may or may not know that Tony Bryk is the new head of the Carnegie Foundation, and he has, I'm quoting from a chapter in the very recent Rick Hess book called *The Future of Educational Entrepreneurship*. Bryk gave this talk at American Enterprise Institute two weeks ago, and essentially he's arguing that "a new infrastructure is required built around the core problems of practice improvement rather than isolated academic theories or currently popular but ungrounded policy ideas." And he thinks that—he uses an engineering motif, and he says, "these new innovations should be co-developed by researchers and practitioners, tried out in schools, refined, and re-tried. So, you're always attending to context, audience, and so on with everything. You make everything an engineering problem. You can't build the same building in San Francisco that you can build in New York. The engineering problems are somewhat different. Such work entails an engineering orientation where the varied demands and details of local context are direct object of study and design, rather than being decried as a failure to implement properly." I could go on, but you get the point. Bryk and the Carnegie Foundation are going to drive this notion that research should not be "them-and-them." It should be a "we-and-us" thing, and that only that kind of research is ultimately going to solve this translation and

implementation issue. I would reiterate. I keep quoting you guys back to you guys. So, I'm not a fan of knowledge exchange, because I'm not quite sure which direction the exchange is going. I'm a fan of knowledge development.

JW: Thank you very much. This is getting good. We're having a conversation about power, and no one's mentioned that, but that is the moose head on the table. Who has power? Who doesn't? Who's trying to get certain people to do what? Who's frustrated? And I would say, there's frustration on both sides of the table, on the practitioner side as well as on the research side. And those of us who run organizations that are actually trying to make these connections have our own set of frustrations. So, I turn to Sally to continue the conversation, because you have encountered such frustrations of your own. I'd like you to throw those out for discussion and within the context that we've developed. Thanks.

Sally Kilgore

Well, thank you. I think I'm a humble learner. I left research academe, thinking that I could reform practice. It was my passion, and certainly a very exciting opportunity. But, I was both humbled and made a learner in the most honest sort of way through this experience of working in comprehensive school reform. But, I can't resist giving a story back to Torch. His claim about Teach for America as a religious movement reminded me of a story when I was very young and going around with the public and private schools report which some of you may remember. I was presenting to the big city school districts, because my mentor was too controversial to appear. I was talking about what they called the "Common School Effect," with all this complicated longitudinal

analysis about the kind of effects that Catholic schools had by common curriculum for low income and high income. Frank Macchiarola, many of you remember, Chancellor then of the New York City schools, trained in Catholic schools, now head of public, said, "That's not it." He said, "In Catholic schools, all children have souls." [laughter] Teach for America may have the right idea. Who knows? Just couldn't resist. Let me start with a story I think that illustrates, I think best of all, the dilemma I think we face in the interface between research and practice, and the dilemmas that What Works Clearinghouse faces. I think I'll give you three lessons to be looking for. The issues are interdisciplinary, and I think you've recognized that. The issues require, I think, or doing it well requires a deep knowledge of kind of hidden craft in practice. And that's the big challenge I think you can meet, but it's going to be very difficult. Then, finally, the context specific, which you've talked about and I won't dwell on. So, here's the story. Back in the 90s, I was working with principals, and I was trying to get them to think about how to team teachers to be learners with each other. I had kind of set up a case study, and one of them had to do with a teacher who had some weakness in math, but her other two colleagues were strong, and so on. So, I asked the principals what they would do about this, and they all agreed they would move that teacher that didn't understand the math down to the first grade. That particular thing, I think, is quite pervasive. When I was growing up, and probably many of you in this room, the best teacher was in the first grade, ensuring that the children, as many as possible, would learn how to read. But today, beginning even prior to No Child Left Behind, the practice that is invisible to practitioners—I mean, to people in What Works Clearinghouse—it's an example that this particular practice of putting the least qualified teachers in the first

grade has a major consequence in all sorts of things. We know, for instance, if you take the literature on RTI, response to intervention, the kind of learning disabilities that emerge in the third grade, it has to do with what happens in the first grade that you can seldom...

JW: We don't test in the first grade.

SK: Well, of course not. And that's the other thing. And then, we have incentive systems that are now out being evaluated, and, of course, they prohibit allowing any kind of incentive to be given to a first grade teacher because she's not on the accountability. He or she is not on the accountability system. So, you have embedded, here are all these people running around saying, we've got to have this response to intervention. No one is looking at the distribution of teacher quality that is an implicit decision there that is probably going to be a barrier to any kind of other manipulations you have. So, that is the classic issue of knowing practice, knowing these hidden—hidden to many of us—practices that exist, that really undermine any kind of effort to take something from an experimental trial and translate it into practice as long as—it's kind of like, as long as people aren't washing their hands, nothing else really matters in the hospital. Well, we've got similar kinds of things that are quite invisible to us that I think, not that we have to put every burden on the What Works Clearinghouse, but I think it's an important thing to work on when we're talking about this two-way track that needs to emerge between practice and research, is to get those hidden craft practices out on the table so that we can address them.

JW: Thank you. I'd like to circle back to Michelle, thinking about what you just said, Sally, as well as Torch, and the role of practitioners in the research enterprise. In

the world of NIH, community-based participatory research is an element. It's a strong component. It's taken seriously. It's being written into a lot of the grants. It has its own grant system, besides. Do you see any applications of that model to education?

Anything?

MIB: I guess, if I were to think about it, I think one of the things that the NCI has learned, and maybe this even goes back to some of Kay's comments at the very beginning, is that you have these concentric circles. And the more people you have involved in the process, as well as the evidence, I think the more information you put into your pool of knowledge that you can then continue to build on. And, you can really assure that as you move forward, things are going to be more and more robust in this reaction.

JW: Good. Thank you. Torch, I don't know if you're familiar with that model as you described what Carnegie is up to.

JL: I'll give you two answers, and you can decide whether I passed the test. One is the National Writing Project, which is a national consortium of teachers that do a lot of knowledge generation and a lot of research on their own practice. And the other is Pat Carini's work at the Prospect School on Descriptive Review, which is very much a teacher collaborative and classroom-based approach to research, and it focuses particularly on individual student review. There is now an incredible archive of student casework that's been developed over an extended period of time, but regrettably, it doesn't get accessed very much as a depository of interesting information about how teachers describe their own learning about their own kids.

SK: This is not exactly related, but it's a very important thing that I learned in my early work, and that is that teachers...I was raised as a logician's daughter, and I really like deductive reasoning, and I didn't go to a Jesuit school. But, one of my first experiences with working with elementary school teachers was a total failure, because I didn't really understand that those ladies and gentlemen are largely inductive reasoning people. And, when you bring in a high school wunderkind who works deductively, and I think this affects how they approach research. In other words, it's highly a concrete endeavor, and a procedural one that's very important, and you made that clear. That's very different from a middle and high school teacher that has a very different approach to knowing. So, I think appreciating how that works would be important.

JW: Thank you. And Mark, do you have anything to offer before we move to questions?

MD: No, but I think the notion that we heard earlier in the morning about the craft knowledge that teachers accumulate, and that evidence is not trying to displace or overturn that kind of craft knowledge—that seemed very consistent with what Michelle was talking about in which clinicians and basic scientists are working together. Here, it's that teachers can inform a research agenda. They can talk about the hidden things which are really going on. I think, to the extent that these are two ships passing, it's all to our detriment. But, we really don't have networks in which teachers regularly talk to a researcher. And the fact that there's so much assessment going on, it's displacing your ability to think productively about research, which is not just, "how do I raise test scores," but, "I'm thinking of a new way in which I need to teach math, how can I test it?" I think there's a lost opportunity there that we should try to redress.

MIB(?): Can I just piggyback on that? Just to piggyback on that comment, as I was speaking, I sort of made this sound like there's a very linear process. Just to pick up on what Mark was saying, I think one of the things we've become incredibly well aware of is that, it's not just moving things from the laboratory bench to the clinical setting, but taking what we've learned in the clinical setting, so we can get it back to the laboratory bench to refine it. And those interactions back and forth are just absolutely critical.

JW: We have time for questions, if you'd like to come to the microphone, and then please identify yourself.

Brenda Turnbull, Policy Studies Associates. I'm curious about what we're doing in any field, be it education or medical field, about what are we doing by way of research and evaluation on our interventions that are aimed at getting research into practice? So that, if we've got a practice guide, if we've got an effort to build infrastructure, around communication, around implementation, how are we assessing the efficacy of those interventions? What's implemented and with what results?

JW: Who would like to tackle that one?

MD:(?) I mentioned earlier that I thought one of the big challenges was exactly what Brenda is referring to, which is, that we actually don't know very much about the ways in which research is actually being practiced by practitioners, or the ways in which research is being absorbed and turned into practice. So, I don't think there's much of an accountability dimension around, once research gets out there, what happens to it. I think there are people who are thinking about ways to turn this into a research agenda, so that researchers are essentially beginning to study research dissemination using

research tools and methods. I think I really look forward to seeing this moving into fruition.

JL:(?) A quick response: If I wanted to play with that question, I'd probably look at the use of PalmPilots by teachers doing *Reading First*, because it might allow you to monitor, not just the data they input, but the whole process they are following in the implementation work.

SK: I just was forced by nature of my background to remember Paul Lazarsfeld's work on personal influence and talking about the reputational approach is very important in adoption. I think that my own experience with teachers, I think, may be because they have been, or maybe principals, subjected too much to commercial promises that don't materialize, that studying other kinds of patterns of adoption would be important.

Arieh Sherris for the Center of Applied Linguistics. Would the What Works Clearinghouse be interested in setting up some kind of criteria of quality related to teacher or practitioner research? Would that be on their agenda?

MD: This is probably addressed to me.

JW: I think so.

MD: I don't know if I'm understanding the question. Criteria...probably there is no real intervention there. These would be standards that we would be propagating that would be about what effective teaching might be.

Teacher research.

MD: Teacher-initiated research. We would very much like to have tools on the What Works Clearinghouse website, which is about how to structure research in a way

that's based on interesting question, uses methods, recognizes appropriate cost-effective ways of collecting data, how to report it back in a way that remains with integrity to the structure of the design—primers, if you will.

This might be a bridge between the Wiki people and...

MD: Exactly.

JL: I think that's Bryk has in mind, somewhere in that Nexus...

JW: Could I do my own follow-up question? Because you're talking about research, and I'm wondering about practice, the actual implementation of the research, and maybe that's what you're getting at as well. But, are there plans for the Clearinghouse to encourage practitioners to share their experiences of actually implementing what is on the Clearinghouse?

MD: I think such plans would arise through the creating of networks in which we are interacting directly, perhaps face-to-face, in the way that Michelle describes the National Cancer Institute. We very much want to think more about ways to reach out and talk directly with teachers and practitioners about what they're doing and try to understand how we can learn from them, how they can learn from us better. Yes, it's definitely on the table.

JW: Good. Thank you. Yes?

I'm Barry Nagle. I'm the director of the Center for Assessment, Planning, and Accountability with the United Negro College Fund Special Programs Corporation. I hope that didn't take my question time. [laughter] Sometimes, I think we make the distance between practitioners and researchers too far. I don't know if it is that far. It's that all these things are happening within the context of policy. And I'm wondering if,

through the What Works Clearinghouse, if you're trying to inform policy so that these things can get applied more easily, or if there's actual policy research, so that these things kind of filter down. What's the approach? Is it up or down?

MD: It's very much based on the notion that these reports probably filter down through organizations who are tasked with disseminating research findings. So, for example, I mentioned ASED and the like. *Ed Week*, for example, disseminates these research findings, sometimes as little briefs, sometimes as longer stories. And so, I see that as a mechanism that moves the research findings from the website to dissemination organizations, and then ultimately, down to school districts. I think state education agencies also play a role in there, too. We also have ways in which people come back to the website, and they report up to us, and they ask for different kinds of things to be studied, too. So, it is an interchange, if you will.

Is it true you're going to do videos of each paper available on YouTube?

[laughter]

The context for my question was, I was a teacher for 10 or 11 years, not far from Torch. It wasn't the enthusiasm about applying the research or the interest in the research. It was the angst, or whatever term you want to use, about being able to do these kinds of exciting things within this structure. And that's what I'm worried about—well, not worried, wondering—is being left out of the discussion.

SK: I don't know. I was just thinking, maybe you're talking a little bit about the context issue and the risk issue in real time, versus an experimental design, may not have the associated consequences, or people may not feel that as they do in a real-time situation. Is that what you're talking about? So, I don't know whether there's any...

MD: One important aspect to keep in mind about the Clearinghouse; it's not doing primary research. It's not doing the studies. It's actually reviewing them and assessing them according to standards and reporting on their findings to the extent that, in setting these standards, it actually promulgates more such research. That's a good thing. The question really is more about researchers working with teachers directly, which we can offer enthusiasm and support for them, but the Clearinghouse itself is not doing the research.

SK: I do think though, the one thing I do hear relevant, is the whole issue of adoption. That, if you were doing some kind of experimental trials, that you would find some practices that were highly efficacious, that because they had certain kinds of risk factors for teachers, would have a lower adoption rate, even if the knowledge were out there.

JW: Thank you. Yes, please.

My name is [inaudible]. I'm a reporter with *Education Daily*. I have a question about whether there's been any research as to what are the discussions that teachers are having when they're sharing this information with each other. And, if there's a way to take that and produce practice guides based on math teachers concerned about algebra, what elements of algebra; reading comprehension, what's working with reading comprehension. Is there any sense of what the teachers care about from these exchanges?

JW: Mark, I think you referred to some feedback mechanisms at the Clearinghouse that make you able to stay in touch.

MD: They wouldn't answer the question, because these are more about whether the teachers themselves are, in some ways, organized to provide information to other teachers about their efficacy of their practices, and the like. It strikes me more the Wiki notion that Torch was talking about is closer to that.

JL: Part of my response would be, that teaching remains a very isolated work. Teachers don't talk to each other very much, and even when they do, the conversation is often structured. So, the question becomes, how do you help create a culture of trust, really, among teachers? For me to admit that I wasn't very successful in teaching five kids in my class how to do X is not necessarily a generally acceptable behavior, but you have to essentially create the conditions and climate in which that conversation can take place. Once you're at that point, now we can begin to think about, how do we access resources collectively to help us think about how to do this work better.

SK: A good example of the format for that is the looking at student work tradition that is emerging.

Just a follow-up. I was at the National Staff Development Council conference, and one of the things that came up when Linda Darling-Hammond was giving her speech was looking at how other countries have done this. There's a lot of collaboration in Singapore. She mentioned there are research projects that teachers do together and that researchers disseminate it in journals. Just putting that out there.

JL: Did you ask about what the comparative salaries are for doctors, lawyers, and teachers in Singapore? I'm serious. Teachers are paid as much as or more than doctors and lawyers.

I'm Bob Granger, and I'm now in my role as president of William T. Grant Foundation. There's a conflation of ideas here that I just want to try and see if you guys could help us clear up. One is, this issue that it would be wonderful to know more about how practitioners are using the evidences that exist. That's a very different question than how one "scales up" efficacious interventions to implement them broadly. That's the sort of stuff that Michelle is trying to study when she's trying to study translational research. That's actually fundamental to the IES process. They try and find things that are efficacious and then scale them up. When they do that, though, it's not like they're studying the processes of scaling up. What they are doing is trying to figure out if X works when it's tried a lot of places out of the hands of the developer and things like that. So, what people are calling for here, in some sense, is creating a new topical area on the What Works Clearinghouse site. I'd like to know about the process for that. And, that is, effective ways of scaling efficacious curricula or teacher development practices to make them more broadly implemented. It's the kind of stuff that exists in the craft knowledge of people like Bob Slavin or other people that have had exactly that problem. That's really the issue, is how do you think about that as a research topic. What would be the process, if any, of having that be adopted as a research area on the What Works Clearinghouse?

MD: You're talking about technical research about just scaling up as a phenomenon and how to expedite it.

BG: I'm talking about, for instance, there were two recent evaluations of various approaches to coaching and induction, which are attempts to try and make behavior happen widely. I don't know how much more of that is going on. I don't know what

whole school reform developers have done on their processes of making these happen in lots of places, but it's not [inaudible]. And frankly, given the importance of that topic, when we started in some of these other areas, we virtually had two studies. So, one of the things about putting it up as an area is that it draws work to that area.

JW(?): Could I add something? It's a marketed question as well. You've built a library. It's taking place before our eyes. It is more diverse, and more helpful, more useful than ever before. So, it's not just about dissemination, but how are these solutions marketed in a way that could promote scaling up in building districts across the country? Could that be part of the mission of the Clearinghouse?

JL: Can I speak briefly to that? And then I'll let Sally talk, because I'm faster than she is. In 1998, the New Jersey Supreme Court mandated the implementation of Comprehensive School Reform which, at the time, was perceived to be the most research-based set of interventions available. I deeply regret that the department never funded the kinds of research that Bob is talking about. That would be a whole other conversation. One of the things since I was either a...I was a victim of this court order. We did pay a lot of attention to implementation issues and scale up issues, and I will say on behalf of Robert Slavin and Success for All, that one of the things that we looked at pretty carefully was the consistency of staff support from each of the models. And the thing that was clearest to us, is that the consultant turnover within the models was the best predictor of whether the model got implemented or not. And Success for All, to its credit, had the most consistent staff support of any of the models. Some of them, every time the representative of the model came, it was a new person, particularly in instances where the models were using graduate students to be the facilitators. So, you

spent more time training the person on how to find the bathroom than you did learning how to implement the model.

SK: I would add to that. First, one of the dependent variables that should be added is not just adoption, but sustainability. In other words, that you get a lot of kind of mass behavior that may not result in something that has a long-term impact. And in adding that variable, then I would add to Torch's comments the issue of who's the decision maker. Because we saw cases, and I think Bob and I were both talking about where the decision was imposed by someone. The quality became irrelevant. The revolt became primary. So, those are the kinds of things that, I think, procedurally can affect and should be questioned.

MD: If no other questions from the floor, we have invited—if the panel could just stick with me for 10 more minutes here—we've invited Paul Decker, who's the president and chief executive officer of Mathematica, to just offer some summary thoughts on the morning and some of the key themes that he's heard. So, Paul.

Paul Decker

Thanks, Mark. I appreciate the opportunity to make some remarks today. Over the past two-and-a-half hours plus, there's been a lot of insight thrown out on the table. So, forgive me if, given that volume of insight, my remarks and my processing of that information is somewhat disorganized. But first, let me speak to the basics. In the current era of accountability, the What Works Clearinghouse is responding to a clear need. We have educators, parents, and the public who need objective information about products and approaches that schools can use to potentially raise student achievement.

And the What Works Clearinghouse is designed to respond to that need by providing easily accessible and digestible information and information that's based on transparent standards and objective principles. As we've heard here today, systematic reviews, while they're new to education, they're not necessarily new to other fields. There are things we can learn from work that's already been done in the fields of health and medicine; information about producing research, getting it out in the field, and working with practitioners to use this valuable information. We heard about the experience of the Cochrane Collaborative, and that experience shows us the need for expanding the number of people involved in research synthesis, how we go about choosing topics to be reviewed, and how we continue to build the research base. And it takes time to do that. I was particularly impressed with Kay Dickersin's discussion, where they showed that her group has wrestled with, and developed clear positions on, some of the issues that come up in conducting these kinds of reviews in general, the same kinds of issues that are coming up in the What Works Clearinghouse. I would say, based on what I've heard, we need to continue to listen to her over time. So, I think the kind of reaching out that we're doing in these sessions is very valuable. Similarly, I think the experiences of the National Cancer Institute that Michelle described provided some food for thought for where we want to take the Clearinghouse and how we can provide translational research and research translation to better meet the needs of the field. Again, I think that shows the value of this kind of reaching out. Clearinghouse really begins, as we know, with high and rigorous research standards, so we can be sure that the findings that we see in the literature really do signal causal relationships that can raise student achievement on a large scale, as compared to the kinds of interventions students might

otherwise receive in the absence of the information. The standards are crucial, and they can only be set by an independent entity, one whose sole purpose is to provide unbiased and objective information about what research is found about effectiveness using transparent and clear standards. As you've seen here today, the Clearinghouse is going through an evolution and has gradually moved into a new phase. So, even with the right research, we need to develop more effective ways in ensure that educators and policy makers use the evidence that's available to make decisions. And, as we've heard, that's not an easy task. So, that brings me to a natural tension that I see in the Clearinghouse that's always been there, but as we think about dissemination of information and how to be as useful as possible, to educators, that tension comes to the fore. And that's the tension between maintaining the rigorous and objective foundation of the Clearinghouse and the desire to be as informative and useful as possible to school practitioners. This is a concern for me as president of Mathematica, because I'm the person responsible for protecting the core values of Mathematica as an organization, those values including objectivity and rigor. Fortunately, IES shares those values, and they've played a crucial role in helping us maintain those values in the implementation of the Clearinghouse. Now, this reminds me of discussions that I've had in the past with other companies that are involved in health policy research, as we are. And when these companies have discussions, they often want to get a sense of the nature of the work that different companies do, and the spectrum they use and the measure they use to figure out where people are on the spectrum, they asked the question, how close do you get to the patient. Meaning, are you a firm that's simply involved in conducting research, or do you also translate that research to practitioners?

Do you provide advice to providers? Do you provide technical assistance to providers, or are you involved in consulting? All of these getting closer to the patient. I used to joke when this discussion would come up, the old Mathematica model was, I think, we generally weren't even in the same zip code as the patient. We were off somewhere with a dataset doing some very distant research and hoped somebody would listen once that research was generated. And that's changed over time, and that's an evolution I want to highlight. But the analogy for What Works Clearinghouse, I think, is clear; how close do you get to the student in this process. And, as I point out, What Works Clearinghouse, over time, has gotten closer to the student, but in a considered measured way. And I think the practice guides that we've discussed are a key step in that direction, but, again, in a clearly defined way. This has been an evolution for Mathematica being involved in the process, as well as an evolution for the Clearinghouse, so that's why it's gotten my attention. So, this gets back to the tension that I described. As educators and administrators seek help, how far will the Clearinghouse go to provide advice? We need to continue to house the work of the Clearinghouse in the foundation of rigorous evidence. That's clear to maintain the brand of the Clearinghouse. But, as there's more contact with school districts, there's a risk that increased contact with the districts may mean that some individuals associated with the Clearinghouse may go beyond that foundation. But, as they could slide beyond the evidence or could slide beyond the foundation that the Clearinghouse is housed in, and that could harm the brand of the Clearinghouse, which would be a problem. One element that came up in the discussion this morning in Kay's talk is important to this, and that's the concept of the separation between the review process and the policy

process. The important question here is how to establish and maintain such a separation, that it maintains its balance between being as useful as possible to the education community, but still maintaining the objectivity and the rigor of the Clearinghouse's mission. And that's going to require continued vigilance on our part in order to maintain that balance. I don't know all the answers in how to make that work, but I can tell you, that's going to be my focus in the future on the What Works Clearinghouse; how to maintain those values, and the rigor, and the objectivity, but still make the entity as useful a process to the education community. I want to thank everyone for participating today. Thank you to the presenters, and thank you to the audience for your participation.

[END OF MEETING]