

**Dropout Prevention and Youth with Disabilities:  
What the Research Says Really Works!  
Dr. Brian Cobb, Colorado State University  
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**MODERATOR:** And at this point, I would like to hand over to our speaker today, Dr. Loujeania Williams Bost. Loujeania?

**DR. LOUJEANIA WILLIAMS BOST:** Welcome. On behalf of the National Dropout Prevention Center for Students with Disabilities, I would like to welcome you to our session today, "Dropout Prevention and Youth with Disabilities: What the Research Says Really Works!"

**DR. BRIAN COBB:** I'd like to welcome all of you folks to this web seminar today. It's an honor to be able to talk to folks all over the country who have an interest in this topical area, and it's quite startling to me that we can do it in this format. I've never done this before, so I hope things come through satisfactorily.

I have only nine slides today to talk about. I will talk at some level on each slide, and I want to give you a little advanced organizer on how this session will unfold today, what I intend to cover.

What I'd like to do is start with a discussion of what research is, and what we did in our work, or in my work on a large project, to try to identify effective interventions that helped to reduce dropout in youth with disabilities at the secondary level. I'll then talk some about what we found, and what we didn't find, and make some recommendations. And then we'll have a Q&A and finish it up. Next slide.

One of the problems in dealing with trying to get effective interventions to the field—to administrators, teachers, and others who are interested in implementing interventions and interested in affecting the outcomes, such as reduction of dropout—is to be able to understand the difference, understand what research is, and to be able to distinguish between research that is generalizable and research that, even if it is highly credible, would not be expected to produce the same results if implemented by someone in a local, by that individual in a local context.

When you get into the "what works" business, which is what I've been in for the last few years, you have to be able to set some boundaries around what you mean by research. Let me just give you some examples that have been used over the years.

One question people ask is whether or not research has to be written down. Is it alright to be able to just say "I conducted a study, and here's what I found"? And is that credible enough or believable enough for other people to just say, "Well, if it worked for you based upon what you said, I expect it'll work for me."?

A second issue is whether or not research can be secondhand. Frequently, people will talk about research that they have heard others have done and say, "Well, somebody else told me that that worked, and so my guess is it'll work here if I can try the same things that they tried elsewhere, and hope for the best." And oftentimes you'll have people call research, they'll call it research, and it will simply be opinion, and it can be opinion that can be produced by experienced people or novice people, and no one would know.

A third set of issues around research is that whether or not something worked, was reported to have worked as research—an intervention, for example, to prevent dropout—worked in one place, doesn't always mean that it'll work in another. Every piece of research in education and dropout prevention research—in particular, in youth with disabilities—has to always be looked at critically in terms of what was actually done, with whom, where, with what outcome, and in what political or historical context. So, there are contextual and environmental factors that would dictate whether or not a piece of research that any one of us picks up in a journal or reads, and you come to this kind of defining moment, or aha! that says well, that looks like it will work here, "I'm assuming that that will work where I am and I'm going to try it." Hence, you head off down a road of investing time, resources, and other things based upon an assumption that that research will transfer. And it's not always the case. It doesn't always transfer.

The final issue that is important to understand as a background issue is whether or not that research, regardless of how clearly the intervention was described—the dropout prevention, the thing that you do—regardless of how clearly the outcomes were described, whether it was implemented in such a way that it is believable that the intervention itself caused the outcome to occur, and the pattern of findings in the outcome are something else.. So, the summary of that discussion is a, provides a background to try to understand how an individual in any one place can work through the volumes and volumes of literature, cause and effect literature in dropout prevention that have been done in a variety of places, with a variety of different kinds of people, with a variety of outcome measures, and in a variety of different contexts, and be able to sort through that and pick out a particular treatment or intervention and take a stand on that and implement it, using all of the resources, and all of the personnel training, the costs, and the time associated with implementing an intervention.

So what I want to do is talk first about what are some current standards for selecting an intervention. How do you go about sorting through what you see to make your best guess that you're going to pick something out to implement that will work in your local context? Then I'll discuss my work, the work that I did where I tried to focus on the kinds of issues and help others who are reading the work that I produced have some confidence in the results in their local context.

First, the [blank audio] has come out just recently with a kind of a hierarchy that says what are the, in what order do you look at written work and try to determine what's the most believable, what's the most credible, what's the most likely written piece of research work that would give evidence to me, as a local administrator or a programmer, and try it myself. And the answer, the hierarchy that has recently been put out by the Institute of

Educational Sciences in the What Works Clearinghouse, starts with a systematic review, which is a meta-analysis and which happens to be the kind of work that I've been doing. And then they move down *from* that review to well-done randomized control trials, well-done quasi experiments and others they use, they move to original research that uses higher and higher standards for conducting that research, and then move down in rank order to correlational studies and just expert opinion. So, the reason I say that is that I want people who are listening to this Web seminar to know that the results of the work that I'm talking about today are the results of systematic review work, which is currently being conceived as the most credible and the most likely to yield results that others will find useful and will work in other places.

Now, when you do systematic review work, the type of work that I've been doing, you have to focus on a certain set of standards, some of which are inclusionary standards, or criteria, and some of which are exclusionary standards, or criteria. This may sound a little technical. I'm going to try to get through this as quickly as I can, but it is important, I think, for you to know in order to set a value on what I've come up with. I'll try to get through this in the next 10 or 15 minutes. Excuse me for just a second. I want to take a drink of water.

We back on okay?

**MODERATOR:** You're back on, Brian.

**DR. B. COBB:** Okay. Would you back up one slide, please?

**MODERATOR:** Sure.

**DR. B. COBB:** The slide that you now see talks about what are called inclusionary criteria, which any systematic review has to set in order to be able to put some boundaries around the "research" that they're looking at. In our particular work, we were interested primarily in the results of different interventions on outcomes, dropout prevention outcomes for youth with disabilities. So, every single study that we looked at had to have youth with disabilities in the sample.

A second issue for including studies deals with the age range. All of the students in the studies which we looked at in order to assess interventions that affected [inaudible], all of the students had to have had an age of from 12 to 22.

A third issue, which seems almost too simple to talk about, but nonetheless, is something you really have to look at in the literature, is whether or not the research was actually about intervention. Frequently, you'll see people talking about improving dropout prevention for youth with disabilities, but they don't actually implement any research. They may talk about somebody else implementing it, but they haven't done it themselves, and they haven't collected data themselves. So, every study that we included in our work was the report of original research of an intervention that was implemented, and it had to have been conducted between the years of 1984 and 2003.

It also would seem obvious, but it isn't always the case, that a measured outcome was reported in the studies. So we must have seen an outcome that was either a direct outcome of dropout, of which there were very, very few, or in our case, we made a judgment to also accept correlates of dropout that are highly correlated with dropout, such as suspensions in school. Frequently, they might have a measured outcome that was suspensions in school. So, those were inclusionary criteria.

We also had a set of exclusionary criteria, which had to do exclusively with methodological standards in that each study that purported to have a cause and effect implication—that is to say that if you do this with kids, you can expect to get that—must have had minimum methodological requirements in order to be able to assert that claim. Next slide.

You've seen the inclusionary criteria that had to do with the age range and types of kids, and all that kind of stuff. I now want to talk about methodological standards, or exclusionary criteria. In other words, how, why did we exclude studies from our review that what we believe did not meet minimum methodological standards, minimum research standards in the way it was implemented. The standards that we used, by the way, are common standards that you find in the What Works Clearinghouse, and in virtually any accepted text on how to do systematic reviews of original research literature. I'm going to go down through them fairly quickly.

There are standards that have to do with internal validity. Internal validity is simply the extent to which a causal claim—"if you do this, you'll get that"—is a credible one, given the context in which the research was done. And another set of standards are external validity standards, which have to do with the extent to which you could believe that what was found where that research was conducted would also work great in your life, or in your professional environment. Next slide, please.

Internal validity standards—and I'll think you'll recognize the importance of what I'm talking about as I go down through them. Each research study that we looked at had to define what it was they did. They had to clearly tell us what the intervention was—if it was a cognitive behavioral intervention, or a counseling intervention, or an applied behavior analytic intervention—they had to describe it.

They had to describe the outcome and evidence on its validity and its reliability. They also had to describe the design of the study such that we could believe that an appropriate causal claim could be stated and was credible. Some of the things that are important in studies that people don't typically think about, but that *do* affect the quality of a cause-and-effect claim, are things, for example like, "Was consent solicited and acquired from the participants who were involved in this research?" And was attrition or people leaving the study in the middle of it equal in the experimental group and the control group? And was that attrition not overly high coming out of both groups such that the comparability of the groups was compromised?

Let's move on to the next slide. In terms of the standards for external validity, remember we're talking about the believability for a reader to think that what was found in the original research environment could be expected to occur where this individual is working. So the questions that are asked around external validity have to do with what were the characteristics of the sample? What was the educational context? Were effects broken out for significant sub-groups? Were the statistics appropriate? Was the analysis done correctly? Was there adequate information to calculate effect sizes?

All of those considerations we put into a coding structure. We looked at literally hundreds of studies, and we tried to figure out, from those studies, what were the types of interventions that worked in dropout prevention for youth with disabilities.

Now I'd like to talk about what we found, and I think probably most of you would want to hear what we found. If you give me just a minute, I'm going to take a drink of water. To start with—and, unfortunately, the research base in dropout prevention that meets these minimally acceptable standards for methodological quality is fairly limited. Hang on just a second. I need to go off video. Better? [background conversation]

**MODERATOR:** That's great. Thank you, Brian.

**DR. B. COBB:** Are we still on here?

**MODERATOR:** Yes, you're still on audio. Go ahead.

**DR. B. COBB:** Okay. Part of the problem, I think, is that there are not a lot of studies that actually measure dropouts, and it's pretty hard to actually measure that. And so many of the studies that we included in our work and in our final reviews not only looked at the measurement of dropout, but also looked at correlative dropout. For youth with disabilities, that most often was measured in these studies with violent, physical, and verbal behavior, and the reduction of such. So in many of the studies that we reviewed, that was the outcome measure, not actual measures of dropout. Had we held onto that [inaudible] measure of dropout, we wouldn't have had any studies in our review, and there'd be nothing to report, or largely nothing to report.

There were two reviews that we wrote, one of which was largely the product of studies with high-incidence disabilities, that is to say youth with emotional disturbance and youth with learning disabilities. And the second review was with only a handful of studies for youth with low-incidence disabilities, largely severe, moderate-to-severe mental retardation.

I think most folks are going to be interested with the first of these two reviews, and so I'm going to talk a little bit about that one. That was a review around cognitive behavioral interventions. And if you go to the next slide. Cognitive behavioral interventions are interventions that were implemented in a school context, secondary school context, all of them that combine some level of cognitive or, often called, meta-cognitive interventions with accompanying behavioral processes, as well.

The cognitive side, or the cognitive part of these interventions involves things like problem solving with a five, six, seven-step problem solving approach, where a teacher, or an aide, or someone in the school would actually sit down with groups of individuals who may be dropout-prone, who may have dropped out and be coming back in for re-entry, and go through a process of helping them sit through and understand the things that they can do when they get to a point where they are going to get aggressive, either verbally or physically, and to try to stop that by using this type of meta-cognitive process. And so the cognitive part might be something like self-instruction, waiting for 10 seconds, teaching kids to actually not yell or scream or hit somebody, and simply teaching them to wait 10 seconds. And in that process, you think about what the problem is, what are the different choices that I have, what could I use for different alternatives, what would be the consequences? And, obviously, they can't do this all in 10 seconds, but the part about 10 seconds is to simply act, and then go through kind of a brainstorming process, self-instructed, to try to reduce the frequency and the intensity with which these youth engage in these kinds of behaviors.

There's also a classroom behavioral component to these interventions that is almost always, that we found was always involved. That was where students are taught to, where adults will model that behavior. They will involve behavior rehearsal by students, and they'll even just skip some of the things where they're in a classroom environment where they will goad each other and practice this self-instruction, self-queuing on how not to immediately engage in that kind of verbal or physically violent behavior. They may involve parents practicing that with those children at home, and in some cases, there's actually behavioral contracting with these students where they are monitored and they keep track of their own behavior, and they get contingency awards for reductions in the frequency or intensity of engaging in that kind of behavior. So, you can see that these are largely kids with emotional disturbance, and kids that are really unruly and that are very much at risk of being removed from school, suspended from school, which, frequently is one of the first things that will happen and the last thing that happen for a student who ends up dropping out. Next slide, please.

I wanted to make sure that you knew, from my perspective, and in our work, where the best studies that we could find, the best evidence that we could find of this type of intervention, and it is clearly that Check and Connect intervention that has been researched for almost 10 years now, at the University of Minnesota. Let me describe just a little bit about Check and Connect. It has all of, not only is it well done methodologically, the research that these people have done, in terms of a credible cause and effect connection is extremely well done. They've used excellent technique and randomized assignments and implementation of the intervention, all of those kinds of things that are important. They've done very good work there. But the actual intervention, which is, I think, what most of you are interested in, is also the most comprehensive and well-described.

The Check component of the Check and Connect is a component in the school where there's a continuous assessment of students who are at risk of dropping out to measure

their engagement and keep track of them and stay on top of them to keep them from skipping school, unexcused absences, those kinds of things. So somebody is there as what's called a "monitor." Someone is always there, whose job it is to keep track of a set of students and make sure that they are not engaging in things that could ultimately cause them to either be suspended from school or drop out of school just as a by-product of not showing up. So, that Check component is an assessment component of their keeping them in school.

The Connect component has two different types of interventions. One is the problem-solving kind of thing that has to do with the cognitive component. And the other is a more intensive intervention that is used that has more of the behavioral stuff where they go into classes, and then practice how to behave, practice how to maintain their cool, so to speak, and keep themselves in a position where they're not going to be suspended or expelled from school, and, hence, increase the chances of dropping out.

You can see at the bottom of the slide the web site where you can find information about Check and Connect. In our assessment of all of the interventions that we found in the 17 studies that ended up in this systematic review, the characteristics that we found in the Check and Connect intervention were very common in the other interventions that were reported in the 17 studies. And some of those characteristics, in addition to the cognitive component *and* the behavioral component, are a level of comprehensiveness, and, unfortunately, but it seems to be true, they're also [inaudible phrase] implement this program for a number of years. It cannot be just implemented in six months or one year, and expect to treat kids automatically. Some kids are going to come out of that okay, and, maybe perhaps not need future intervention. But the assumption is that this Check and Connect intervention has to be there and available for kids, particularly the most difficult kids, all the way through their high school career.

The second intervention area that we found in our review had only seven studies, and it involved students who were very severely and moderately severely retarded, and even profoundly retarded. You can imagine, in the area of student disabilities, there are a number of studies that youth or children or youth with severe and profound and even moderate retardation, you will see a number of studies that are single-subject design, using applied behavior analytic techniques. And so we found a number of those studies that met our methodological criteria, and we, although there weren't many, there were only seven. The reason why there are only seven has to, deals with the outcome. There just are not that many studies that deal with dropout prevention or even the type of verbally and physically aggressive behavior that would directly be expected to lead to dropping out.

I'm going to speak only briefly about this review because it does reflect only seven studies, and it is quite situational in terms of the types of students with whom this particular technique—applied behavior analysis—worked. You can go to the next slide, please.

The general characteristics of the interventions that worked in this area were the

comprehensiveness of the intervention itself. And I would expect people want to work on the reduction of violent physical and verbal abusive behavior in kids with more low-incidence conditions. They look at the??? Study in our review—and that is on the web site of the National Dropout Prevention Center for Youth With Special Needs—and look at the wraparound intervention that is described in that particular study. It involves a very comprehensive intervention that is a contingency kind of thing that's associated with applied behavior analysis, but it involves components that are done at home, at school, and out in the community. And it involves intensive behavioral programming, contracting, and ongoing monitoring of behavior in all of those different places. It was a well-done study. I don't want to talk more about it because the study, as you'll see if you review that study, each of the characteristics for each individual student in that study were done in a variety of different ways, and it was a multiple baseline study, if I remember right. And so you have to read it in order to know it. But just the things you'd know about that—the overall review of these interventions that made up this systematic review of applied behavior analysis—was that they were comprehensive in focus. And let's go to the last slide.

As just a summary, I'm going to step back again and talk a little bit about what it is that researchers need to do in order to produce work that can be read by and believed to be useful in the field. And that's going to require, I think, one federal support for systematic reviews, because they are the highest standard of evidence, and more and better guidelines for federally-funded intervention research and model demonstrations around where the evaluation designs are implemented at a level that produces more credibility around [inaudible] effective link. With that, I think I'll take questions.

**MODERATOR:** Thank you, Dr. Cobb. If you wish to submit a question to our speaker, please do so by using the Question and Answer feature. The Question and Answer option is located in the blue area to the left of your screen. Simply type the question into the 'Ask A Question' area at the bottom of your interface. Please note that questions submitted on the web are private, and only the presenter can see your questions. Dr. Cobb, we have a couple of web questions for you.

**Question 1:** *Will you please list which programs you've researched during your systematic review work?*

**DR. B. COBB:** I do not have those off the top of my head because with this particular web seminar I only looked at the best evidence. So I don't have that. Those programs are listed, however, in the review on Cognitive Behavioral Interventions, and in the review on Applied Behavior Analysis that are on the web site of the National Dropout Prevention Center.

**Question 2:** *What can I do to make sure my dropout prevention program is designed to add to the knowledge base of proven practices in dropout prevention?*

**DR. B. COBB:** Would you repeat that again, please?

**MODERATOR:** Sure. *What can I do to make sure my dropout prevention program is designed to add to the knowledge base of proven practice in dropout prevention?*

**DR. B. COBB:** I'll answer that two ways. If you're interested in adding to the knowledge base by answering the question—*If you do this, you get this*—and answering that in a way that the rest of the world who hears about it or reads it can believe it, then what you need to do is make sure that you implement the research work, or the evaluation of your intervention in a way that has adequate [inaudible phrase] to make that claim. It requires some research expertise or evaluation expertise to do it. I don't think that if you simply implement it without having some level of expertise in that area, that you can automatically assume that you're going to add to the knowledge around whether you do this, you get that.

The other way to answer that is, if you want to add to the knowledge base, like answering the question *WHY did the effects occur?* In order to answer the WHY questions, I think, I believe you need NOT do this quantitative cause-and-effect type of research, but more detailed, deep, but well-done qualitative research, case study research around the intervention itself with someone who's trained to do that kind of work.

**Question 3:** *What about counseling and ABA type interventions? How well do they work?*

**DR. B. COBB:** The ABA ones are the ones that I was talking about, applied behavior analysis, so I think I've covered that. I think that question came in before I actually got into that discussion.

The counseling interventions, we did find some studies that all were around counseling, but the context in which the counseling occurred was so varied that we couldn't put a review together and make a recommendation about how well they worked. Let me give an example. Some of the counseling occurred in experiential programs out in the wilderness. Some of them occurred in clinical settings, in clinical hospitals, and some of them were high school counseling programs. But the problem is adding those all together and dividing by the number of studies doesn't lend a lot of credibility to a single intervention that the counseling, itself, was too broadly offered, as it was reported in the literature, to be able to put it together in a review.

**Question 4:** *Could you speak to the findings of the May 1988 study?*

**DR. B. COBB:** Oh, dear. [laughter] No. The short answer is no. I can tell you that the May study was around high probability and low probability behaviors, and doing a detailed observational analysis of what types of behaviors and outcomes were accepted at a higher level by, I think it was two or three students in that study who had profound mental retardation, and how to be able to detect what they considered to be what are called high probability, low probability behaviors, a very technical study.

**Question 5:** *A research team is interested in learning more about your study. Has it*

*been published? And how do we access it?*

**DR. B. COBB:** The cognitive behavioral review has been published. It's just going to be coming out in Remedial and Special Education in the next issue of that journal. However, the best way to get it is right on the web site of the National Dropout Prevention Center for Youth with Special Needs, at Clemson University.

**DR. L. WILLIAMS BOST:** And that web address, can you hear me, Brian?

**DR. B. COBB:** Yes, I can.

**DR. L. WILLIAMS BOST:** That web address is [www.dropoutprevention.org](http://www.dropoutprevention.org). Go to the National Dropout Prevention Center for Students with Disabilities web site, and if you go underneath Evidence-based Practices or the Resource page and click on Research Reports, you can download a free copy.

**MODERATOR:** Loujeania, can you repeat, one more time, that web site?

**DR. L. WILLIAMS BOST:** [www.dropoutprevention.org](http://www.dropoutprevention.org).

**MODERATOR:** The next question.

**Question 6:** *Please explain "wrap around."*

**DR. B. COBB:** Yes, the wrap around intervention that Myaard used in his work, the words "wrap around" meant implementing the types of interventions, applied behavioral analytic intervention, that they used in all different types of settings—the community setting, the home setting, the school setting, not just implementing this in the school, the work that they were doing, the interventions they were using.

**Question 7:** *What definition of dropout are you using? Federal?*

**DR. B. COBB:** No. By and large, the outcome measures in the studies that we reviewed, for both the cognitive behavioral review and the applied behavior analytic review, were not even dropout measures themselves. They were correlative dropout. There simply isn't the research out there. Even research that might not meet minimum methodological standards, but certainly those that do, there isn't the research on dropout with samples of youth with disabilities where the effects for those youth with disabilities could actually be assessed. So we didn't use federal standards at all for dropout prevention. We used whatever those authors or researchers in those studies reported, and we assessed them only for their internal qualities within the study, and not whether those measures aligned with federal, or state, or any other types of operational measures for dropout.

**Question 8:** *With such a large group of ED and LD students, what evidence have you read regarding school successes, school environments, and early intervention?*

**DR. B. COBB:** We did not get into early intervention at all. One of the conditions that was imposed upon our review—and by the way, all of this work was the product of a federal grant from the Office of Special Education and Rehabilitative Services—one of their requirements was that the studies must have been conducted on youth with disabilities who were of the age range 12–22. So we did not get into early intervention at all. What was the first part of the question?

**MODERATOR:** *With such a large group of ED and LD students, what evidence have you read regarding school successes? And then it's school environments and early intervention.*

**DR. B. COBB:** The overall evidence that we had was quite strong in the area of cognitive behavioral interventions. One of the problems, the fundamental issue when you get into the actual *doing* of the research has to do with something called "effect size." I hate to keep moving into technical research kind of language, but you can't answer some of these questions unless you get into that. So I'll try to do it briefly and in a way that you can understand.

The way to answer a question as to what works, and it automatically gets to a point where you're saying "how well does it work," isn't just a matter of whether it works or not. It's a matter of the magnitude or the power of that intervention to make change, and that's what when you ask about successes, you're asking about the power of an intervention to make change with lots of different kinds of kids in lots of different kinds of environments.

The cognitive behavioral interventions that we looked at were quite powerful. Their overall effects were quite high. These were effects that were produced with studies that met the kinds of standards that we insisted upon in order to have that effect be credible, to have that effect be believable and useful out in the field. Unfortunately, with applied behavioral analytic interventions, the ways in which you calculate effect sizes have not been standardized out by researchers. And so what we found were consistently positive effects, but the magnitude of the effect is very difficult for us to estimate.

**Question 9:** *Have you analyzed dropout data by state? And how do you compensate for the inaccurate reporting by state education departments?*

**DR. B. COBB:** No, we did not analyze data by state. Again, the work that we did was only intervention research. It's not demographic or descriptive research, where you're looking at different patterns of dropout data and looking for differences across different kinds of districts or environmental contexts. In order for us to have read a study and included it in our work, it must have reported on an intervention; it must have done something with a group of kids that was of interest to us in a high school environment, or secondary school environment rather, and have reported it in a way that we could understand it and assess its power.

**Question 10:** *Has your worked considered the effects of prenatal exposure to alcohol on behaviors? Have any of these studies you cited addressed fetal alcohol spectrum*

*disorders?*

**DR. B. COBB:** No, they have not. Many of the studies that we have looked at were published in the '90s, and while fetal alcohol syndrome was known at that time, the sampling that was used by the folks that did most of these studies did not break out separate effects for the children in those schools on which that intervention was implemented separately for kids who might've had fetal alcohol syndrome—confirmed fetal alcohol syndrome—versus other types of youth with disabilities who did not. Very few of the studies broke out the results of their intervention work within or across different specific disability areas. They just didn't give us that level of fine grain data.

**Question 11:** *It sounds like the review covered students with emotional disabilities. Did you include studies on cognitive disabilities? Did you include studies that included students with other disabilities, such as limited, sight, or ADHD?*

**DR. B. COBB:** Yes. We did not limit to any particular disability. However, the questioner is correct. Most of the students in both of our, well, let me correct that. Most of the students in the cognitive behavioral review were children with behavior disorders or emotional disabilities. And the reason for that has to do with the outcome measures that we found in those studies. The outcome measure that most frequently was reported by the original authors of those different research studies was a measure of violent, physical, and verbally abusive behavior. And so, as you could imagine, by and large, those studies involved children with behavior disorders and emotional disturbance. However, there were students with other types of disabilities included in these studies. Again, there were no separate breakouts of data for them, so we couldn't assess whether an intervention was more effective for one type of disability than another, but we included all students with disabilities. If the study had kids with disabilities in it and if it met our standards, then it was in.

**Question 12:** *Could you share with us some details of your coding frame. We're interested in both the issues you address and the scale you use to make judgments.*

**DR. B. COBB:** Sure. First of all, I'd be happy to send our code book to anyone who wants it. And I'm not sure quite how to do the technical part of that, but I have shared at presentations I've made about this review, and I'm perfectly happy to share it. In general, the code book that we used collected information in two major ways.

The first was demographic information about the study, and some mundane things like was it published in a journal, where was it published? All that kind of stuff. And then the book of the codes that we used were aligned directly with the codes of the What Works Clearinghouse, and their coding protocol that they used to support systematic reviews coming out of the Institute of Education of Sciences and the U.S. Department of Education. That protocol is called the DIAD—it stands for Design Implementation Assessment Device. We bought a code directly around that, where we had four levels of codes for a ranking for the quality of the study on internal and external validity standards—Very High, High, Minimally Acceptable, and Unacceptable.

**Question 13:** *Are there academic intervention studies that help prevent dropout?*

**DR. B. COBB:** If there are, we haven't found them. We are working on, and have submitted to the U.S. Department of Education, two different reviews on interventions that support academic achievement in kids. However, we did not find any academic interventions that support the reduction of dropout or the reduction of correlative dropout.

**Question 14:** *Are you aware of any youth intervention-related topics, such as violence prevention, that have large numbers of studies that meet the standards that you recommended?*

**DR. B. COBB:** The only one that I'm familiar with was the study, a review written recently in the *Journal of Criminological, Experimental Criminology, or Criminologic*, written by David Wilson. [laughter] That was outside our area of review, but it was one of the systematic reviews that we looked at as background work in our trying to understand all of the theory and all of the work that has been done in the area of dropout prevention. It was an excellent review, by the way. It was something that folks that are interested in that aspect of dropout prevention really should look at. It was published, I think, in 2002. Again, David Wilson. I believe he's at George Mason University.

**Question 15:** *How are Check and Connect programs different from student advisory programming? In configuration? Goals? And objectives?*

**DR. B. COBB:** I don't know about the goals and objectives. I think the difference is probably in the intensity of the monitoring of children. That in order to be a Check and Connect monitor, you have to go through a process of, a rigorous process of assessment on your interpersonal skills, and your commitment, and your willingness to be there throughout the entire period of the protégé's high school experience. You also have to be good at relationship building. And then I think there may be other differences associated with the basic and the intensive interventions that are done in the area of the meta-cognitive skill building that students are given as a part of this Check and Connect program—that's the Connect side—and the behavioral practicing that occurs as a part of the Connect side of the Check and Connect intervention.

**Question 16:** *Dr. Cobb, would you comment on your research intervention findings as they may apply to students in elementary or middle school who display cognitive and/or behavioral concerns as discussed?*

**DR. B. COBB:** Elementary school, I cannot comment on because I haven't looked at any of the research in elementary school. Again, our work was only at the secondary level. The studies that were involved in the cognitive behavior review and in the implied behavior analytic review included studies done in a junior high/middle school context, as well as high school context. That is not the case of the Check and Connect intervention, however. That work, I believe, at least the research that we read and built into our review, occurred all at the high school level. They may be implementing that now—the folks at

the University of Minnesota—may now be implementing that at the middle school level, however, and I believe that the type of intervention that they do, the Check and Connect model, could be expected to work equally well at the middle/junior high level as it would at the high school level.

**Question 17:** *In the past, it seems that collaboration between researchers, policymakers, and practitioners has been difficult. Do you have any suggestions for bringing these groups together for consensus on minimum standards for research?*

**DR. B. COBB:** Oh, boy. [laughter] Please repeat that question. Give me a little time to think about it.

**Question 17:** *In the past, it seems that collaboration between researchers, policymakers, and practitioners has been difficult. Do you have any suggestions for bringing these groups together for consensus on minimum standards for research?*

**DR. B. COBB:** Briefly, no. That's a lame answer, so I won't give it that way. I think that one of the best mechanisms that brings policymakers, researchers, and practitioners together is federally-funded and state-funded demonstration projects. And that is to say, someone has an idea whether or not it initiates a researcher, or a policymaker, or a practitioner, they have an idea about what might work, and they want to try it. Once you get a group of people together to try something, then I do have some suggestions. And I think that federal agencies and state agency people who fund attempts to explore the efficacy of interventions on certain outcomes, like dropout prevention, have an obligation, from my perspective, to require that the evaluation work associated with that demonstration project meet minimum methodological standards. That may sound like I'm self-serving, but the problem is that it can be a wonderful idea. It can be wonderfully implemented. It can be done with sensitivity and get great outcomes, but if you're trying to build scalability, or transferability, and support generalizability and utility by others around what you're doing, it's simply not enough. You have to implement an evaluation of it in a way that makes it credible to others, and that is all about methodological adequacy, or research adequacy.

**Question 18:** *Most of the students who are more likely to drop out in the emotionally disturbed group are African American males. Did the research take into accountability some of the issues associated with this population of students, i.e., risk factors?*

**DR. B. COBB:** The answer to that is that many of the studies were completed in multi-ethnic environments, and we coded ethnic minority proportions to the extent that the studies reported, themselves, proportions of students, particularly in urban areas, who were African American and other ethnicities, as well as those who were White, non-Hispanic.

To get at the more important nuance levels, though, the authors of the research, or the researchers, must have reported separate effect sizes, or separate estimates of the power of that intervention for these different ethnic groups. And that was very rare to see those

separate data presented for breakouts. And remember, those had to have been youth with disabilities who were of different ethnic origin.

**Question 19:** *How have you defined comprehensive interventions?*

**DR. B. COBB:** In the studies that we looked at, the term "comprehensive" equaled, or typically meant, implemented, not just in schools, but outside of schools. That is to say, out in the community, in community-based environments, as well as in the home. And in some cases, in clinical environments.

**Question 20:** *Dr. Cobb, you mentioned Check and Connect included continuous in-school monitoring of students engagement in undesired behaviors. Did your review of the research identify clear, distinct ways of engaging students in school and general or specific classes in their courses of study?*

**DR. B. COBB:** No, it did not. The Check and Connect model and other models that we looked at typically were only focused on a particular behavioral cognitive/behavioral intervention that was designed to positively affect dropout or correlates of dropout. Usually, those were implemented by support services people, whether they be counselors, or researchers, or special ed. personnel, but not regular teachers in regular classroom environments. So the evidence in more inclusive environments is very limited.

**Question 21:** *In your review, were there school districts that had lowered their dropout rate? And were there common interventions that you can share?*

**DR. B. COBB:** That's a very difficult question to answer because [blank audio] answer it directly, problem is because very few of the studies involved in our review actually measured dropout rate over time, which is what this question is asking. The studies that we reviewed were not time series studies. I think there might've been only one, and it was, no that wasn't a time, it was a crossover design, which is a type of within subjects design, but it's not a time series within subjects design. The studies that we looked at were almost all between what are called between group studies. And the classic is an experimental and a control group. And so the measure of effect has to do with a reduction in dropout of the kids that were in the intervention group, as compared to dropout of the kids in the control group, rather than an overall reduction in dropout in a district or a school over time.

**Question 22:** *Have you observed a strong connection between retention of a grade and eventual dropout status?*

**DR. B. COBB:** No, we did not get into that, and we didn't even code that in our studies, and I don't think, in our review. And in most of the studies in the reviews that we looked at, they did not deal with the issue of retention in grade and its affect on dropout.

**Question 23:** *Please repeat the dropout prevention site mentioned.*

**DR. B. COBB:** It's on a slide. It's a long URL. If you back up here, right there, it's at the very bottom. It's [www.ici.umn.edu/CheckandConnect](http://www.ici.umn.edu/CheckandConnect), and it's one word, C-H-E-C-K-A-N-D-C-O-N-N-E-C-T.

**Question 24:** *With regard to the Check and Connect intervention model, what was the difference in dropout rate between this group and schools that did not use the model?*

**DR. B. COBB:** The overall effect size, I believe—and this is an effect size question—the difference in dropout rate is measured by an effect size estimate. And it was a large effect. I believe it was in the magnitude of point seven, or point eight, and that, I mean it may not be an interpretable way of explaining that to the person who wrote the question, but it's the only way that you can legitimate, not legitimately, the only way to code the magnitude of effect when you're estimating similar effects across all types of outcome measures. You must use something that's standardized called an effect size. And when you do, and you see effects in the seven point, eight point, nine and above range, the way to interpret that is that it really, really works. So this is an effective intervention, based upon that effect size.

**Question 25:** *Any evidence that correlates school success to school environment to dropout prevention?*

**DR. B. COBB:** Again, our reviews were focused on interventions that someone went out and did. So in order for us to have looked at that kind of evidence, an original researcher would have had to publish an article that says "we have a successful school, and here's what that means, and here's what implementing this successful school means in the area of dropout prevention." And we did not see studies that would have looked at that. There are lots and lots of correlational studies, as the questioner implies, or states that get at correlating all kinds of reform, whole school as well as within school reform, and successful schools, so to speak, and a whole bunch of outcomes. But the problem is that it's not intervention research in a way that we can build it into a systematic review, because you don't, frequently, when you read those reports, the specific things that were done that are met by "a successful school" are not adequately written down in a way that can be replicated by others.

**Question 26:** *Regarding the FASD question, a great number of people who do not complete high school have prenatal exposure to alcohol. Likewise, a great number of people with prenatal exposure do not complete school due to reasons that are not academic. Do you have any information regarding this?*

**DR. B. COBB:** I'm sorry. I do not.

**Question 27:** *When doing the Check and Connect, do students stay in school more at the lower level, ninth through tenth? or upper grades, eleven through twelve?*

**DR. B. COBB:** I can't remember, frankly, because we only looked at an overall estimate. Remember when you look at a research article, you frequently end up looking at

a table of data, and the table has the mean dropout rate, or the mean continuous enrollment rate, or the mean suspension rate of an experimental group and control group—Check and Connect group and the non-Check and Connect kids, as well as standard deviations. And those are what you need in order to be able to calculate effect sizes. The problem is I can't remember if the folks in that research report broke out early high school versus late high school effects, so I can't tell you that. I'd be surprised if they haven't, particularly, in subsequent research that was published after the reviews that we did, but I can't answer that.

**Question 28:** *Would you agree that no matter how well a particular research study is done, if the demographics are not the same as your school or school district, the results may or may not be transferable? Could you speak to the role of demographics when considering various research studies?*

**DR. B. COBB:** That's a great question. And I think that the answer, the problem is the answer to that is sometimes yes, sometimes no. There's no single answer to that. One of the reasons why the U.S. Department of Education's Institute of Education Sciences has put systematic reviews at the absolute top of the pecking order, or the top-ranked way to look at evidence around what works, is that the very nature of systematic reviews gives you a wide range of study context, and a wide range of types of people, and a wide range of the skills and abilities of the people to intervene, and a wide range of urban/rural/suburban, state level, local level characteristics or context in which those studies were done. When you do a review, you add them all up, you look for patterns of consistency and inconsistency, and analyze those patterns of inconsistency. And so a systematic review is one way of finessing generalizability of the results of one environment to another one, because you're looking across a wider range of environments in coming up with an estimate of the effect of an intervention.

With specific studies, it's important for a policymaker, local policymaker, to be able to look at an original research study and look at the characteristics in detail of the sample on which the work was done, and the school context in which it was done. It's really an expert judgment as to how well the results of that reported research would generalize to your own specific environment.

**Question 29:** *Do you suggest using more cognitive behavioral programming in public school settings versus in smaller, non-public, private environments? How might this work?*

**DR. B. COBB:** I wouldn't know whether or not cognitive behavioral interventions in public schools would be more or less effective than other types of interventions in smaller public and private environments. I have seen, and believe, that small private charter and public schools for youth who are at risk are affected. However, I've not done a review on that, a systematic review, and I'm not sure one has ever been done. So I'd love to see it. So I've never compared, directly, cognitive behavioral interventions, with those smaller, more tightly-knit school environments.

For a lot of schools in a lot of districts, the smaller environment isn't an option. And that this cognitive behavioral review suggests to those districts where it's *not* an option is something that can be done, particularly, like Check and Connect, something that can be done, districts where they don't have the option, either due to expenses or other types of contingencies to be able to implement an alternative.

**Question 30:** *Were there any intervention studies targeting youth with disabilities being served in the juvenile justice system?*

**DR. B. COBB:** Yes, there were. I would say probably two or three, I can't remember, exactly, but two or three out of 17 that were in the cognitive behavioral review were conducted in detention centers or youth detention facilities.

**Question 31:** *In the review of research, were you able to identify [blank audio] [inaudible phrase] factors to dropout rates for students with disabilities, i.e., previous school retention participation settings?*

**DR. B. COBB:** No, we did not look at that issue in the review that we did. Again, our review was on the effects of interventions, so we did not look at factors that contribute to dropouts, because that's largely correlational, and largely attributional research that doesn't get into what interventions work or don't work. So we did not get into that.

**Question 32:** *How is it that three decades of grant-supported research has failed to meet such minimal standards, standards that have been well-known in most introductory graduate classes?*

**DR. B. COBB:** I think you're asking me to talk about myself here, as well as other people. I don't know how it is. I think that there's plenty of blame to be shared at all levels—at the policy level and at the researcher level—so I include myself in that. The simple answer, I think, is that it's much easier to do sloppy research than it is to do good research. And in many cases, the difficulties associated with even doing reasonably well-done quasi-experimental research are quite a bit harder than to do not well-done, quasi-experimental research. Let me explain, just give a quick example of what that means.

If you go in and implement an intervention in a school, it's quite hard to randomly assign children to groups, the intervention and a control group, because classes are intact. That doesn't mean you can't do well-done, quasi-experimental research, but you're already moving from experimental to quasi-experimental, which is moving down the food chain, in terms of the link, the credibility of the link between cause and effect. Once you get into quasi-experimental research where intact classes are the unit of assignment for experimental and control, or interventive control, the only way you can really do well-done research is to have a pre-test, have a pre-measure of what happens to kids before they get there on an outcome, and the post measure. And it just often is too difficult to get pre-measures, so people don't do it. And when you go into and read the reports of a research study where you have an experimental control group, no random assignment, and post-measure only, your capacity to believe that it was the intervention that caused

this effect, and not something else, is quite limited.

So, in the area of dropout prevention research, I think the answer to the "how is it that we over 30 years knowing the standards," the easy answer is it's just very, very hard to do good quality research, methodologically. But I think that's changing with the Institute of Education Science standards.

**MODERATOR:** Okay, thank you Dr. Cobb. We have a few more questions, but what we'd like to do at this point is go ahead and stop the Q & A session and conduct a quick poll here. Okay?

**DR. B. COBB:** Okay. So I just sign off, then?

**MODERATOR:** Oh, no. Please stay on for just a few more minutes. I just brought up the polling questions, so if you would just take a couple of minutes here and please answer our poll.

Poll Question 1: *Considering the types of interventions/programs you have heard about today, which types of interventions/programs are you currently operating in your education agency?* And if you could go ahead and just answer: "Cognitive behavioral interventions," "Counseling interventions," "Applied behavior analysis type interventions," or "Others." [background conversation] We're just going to give everybody just a couple of more minutes here to answer the poll.

Okay, we're right now at about a 44 percent response rate, so we're just going to wait a couple of more seconds here. We're now at 53 percent. I'm going to go ahead, and I'm going to close our poll for today. If your question was not answered in the Question and Answer session, we will be following up with you directly after the meeting.

I now would like to turn the podium over to Dr. Loujeania Williams Bost for closing comments.

**DR. L. WILLIAMS BOST:** We would certainly like to [blank audio] audience for their participation for your engaging questions. And for those of you whose questions did not get answered today, we will be reviewing those questions and providing responses.

[inaudible] also have an opportunity [blank audio] online discussion for [inaudible phrase] with Dr. Cobb, and he will be providing you answers to any other questions that you might have. Again, for additional information related to cognitive behavioral interventions, you can visit our web site at [www.dropoutprevention.org](http://www.dropoutprevention.org). We'd like to, again, thank you for joining us today. And we're down to zero hour. We had as high as 155, and we still have all the questions and all the times, we still have over 75 percent of our audience with us. We thank you, again, and we will see you next time.

**MODERATOR:** Thank you for attending today's web seminar. When you exit the web, you will be asked to take a short survey. People listening by phone only will be receiving

a follow-up email, [inaudible] survey. We have also posted the PowerPoint presentation, the two-week follow-up discussion information, and information on how to contact Dr. Cobb. You can go to [cobb.on.raindance.com](http://cobb.on.raindance.com), click on "Stored Documents," and you'll be able to download all of the documents. Again, we would like to thank you for taking the time to attend our web seminar, and everybody have a great day!

**[END OF RECORDING]**