

To: What Works Clearinghouse

From: Paul Weisberg, Emeritus Professor of Psychology, University of Alabama,
Tuscaloosa, AL 35487

A colleague of mine recently notified me that the What Works Clearinghouse (WWC) reviewed a 1988 article of mine entitled, "Direct Instruction in the Preschool" which was published in Education and Treatment of Children 11 (4), 349- 363. The review appeared in the May 21, 2007 issue of WWC under the title "Intervention: Direct Instruction." According to the review, my research "did not meet WWC evidence screens." The information provided in footnote 12 claimed that the research suffered from having, "incomparable groups: the intervention and comparison groups cannot be considered equivalent at baseline, even with the use of covariates in the analysis."

In this research the academic and other behaviors of four separate groups of children were studied, the first two of which were identified as Direct Instruction (DI) and Child Development (called CD for present purposes). The preschool facility that eventually featured DI programs was called The Early Childhood Day Care Center (ECDCC) and the facility that established CD-based programs was called the Comprehensive Child Service (CCS) program. Both preschools were located on the University of Alabama campus: the ECDCC and CCS were affiliated, respectively, with the Psychology Department and the School of Home Economics. In 1970 both the ECDCC and CCS program admitted children whose entering ages ranged from 4 to 5 years of age.

All of the children's parents or guardians were qualified to receive benefits from a federally sponsored block grant called Title XX which was in keeping with the objectives of the Social Security Act. This entitlement program sought to help parents or guardians from single-parent households seek, find, and maintain employment. As long as these employment-related activities were undertaken by these individuals, they could be assured that their preschool-aged children would receive full-time, year round day-care or preschool services. Parents who were disabled and those who were foster parents could

also qualify for Title XX benefits with the result that children could receive sustained preschool services. During the late 1970's, public kindergarten was offered only for Title I children in Tuscaloosa. During the early 1980's, public kindergarten was available only in a few Tuscaloosa City and County Schools. By the mid 1980's every school had public kindergarten. These circumstances meant that 4 year-old Title XX children entering the EDDCC and CCS programs could be assured of one preschool year. A second preschool year for these same children was possible because public kindergarten which normally enrolled 5 to 6 year-old children was not available. Five year-old children could also start preschool and remain for a single year.

The state and local Department of Human Resources (DHR) is the agency cited in the article and is used here. (Before 1986, this department was called the Department of Pensions and Security or DPS which is the name of the agency cited in other publications of mine.) DHR/DPS served as the sole agency to screen Title XX parents and to place eligible children either in the EDDCC, CCS or other licensed preschool/daycare facilities. At any one time, there were from 6 to 8 other preschool programs located in Tuscaloosa that along, with the EDDCC and CSS, had contracts with DPS and received financial reimbursement for every child they served each month. DHR played a major role both in the initial assignment of every child who originally entered these preschools and in the selection of children to replace those who left the preschool.

Whether new children were placed and enrolled in the EDDCC, CCS or other Tuscaloosa preschools on the basis of random assignment procedures depended upon the type of placement and when it occurred. There were two types of placements. The first type occurred during the first year that Title XX children were enrolled in a preschool which, for most preschools took place during 1970. After DHR completed many parent interviews to determine the caretaker's eligibility, a very large number of children were considered for placement in each preschool. DHR caseworkers identified the location of the preschool to which the parents were to send their children as well as the entry date. Preschool staff members were also told the names of each new child and the starting date.

The second type of placement came at a time when several already enrolled children needed to be replaced by other eligible children. It is the second of these two circumstances during which the process of assigning new children to various preschools was based upon randomization procedures. Information about a child's status and the possibility of leaving a preschool program came from various sources: by DHR caseworkers who periodically spoke to a parent or caretaker; by the parents who volunteered this information themselves; or by a preschool staff member who told DHR about a child who had been absent for one or two weeks. Once DHR knew which children had left or were about to leave a preschool, the caseworkers marked the name of the departing child and the expected or known date of withdrawal on two types of waiting lists. One list was based on those children who withdrew from a specific preschool. The other was a much longer list containing the names of all the children from the 4 or 5 preschools entrusted to each caseworker. The date of removal was noted on both lists and a rank ordering was established for the assignment of new children based primarily on the withdrawal date of the child who left. Thus, replacement of children who left at the beginning of a month was given higher priority than those who left at a later time. Knowing how many children each preschool was licensed to serve, DHR sought to complete the replacement process as soon as possible so that the mother could begin employment and also so that new children had a chance to benefit by attending a full day preschool program. As a practical matter for each preschool, it was important that the facility receive a replacement child as soon as possible because the amount of financial reimbursement from DHR was based on the number of children currently in attendance. DHR knew of these contingencies and sought to keep the enrollment of children at a preschool at the number it was licensed to serve.

It is important to note that DHR closely followed the procedure of selecting children based on which child was next in line on the longer waiting list. DHR had the sole responsibility for making decisions about which children were able to enter a particular program. Preschool administrators and staff who had direct contact with the children did not have any say about the nature of the physical, intellectual/cognitive or socially adaptive features that they wanted a replacement child to have. According to

chance factors, the features of a replacement child could be the same or different from the one who left in a number of ways. For example, a child who left might have been a 5 ½ year-old Afro-American boy who was not physically active and did not interact much with other children. Assume further that his artistic, printing and verbal skills were good. In contrast, his replacement might be a 4 ¼ year-old Caucasian girl who had trouble learning how to write letters and numbers and disliked arts and crafts activities, but she was physically and socially active. As another hypothetical possibility, the next available child on the waiting list could have had a profile that fairly closely matched the one who left. Having been the Director of the ECDCC from 1970 to 1990, it was clear to me and to other preschool directors that one could not predict with any confidence the attributes the child next in line on the list would have.

Except for knowing beforehand that all of the incoming children were of preschool age and came from low-income backgrounds and that many of them were likely to be at-risk for future academic difficulty, nothing else of substance was known about a particular child before he or she started preschool. By using a waiting list that lacked any obvious pattern with regard to a preschool child's physical and behavioral features, DHR had effectively come up with a randomized procedure that governed the replacement of preschool children.

The details of the selection procedures used by DHR to recruit the entry children that constituted the original preschool groups in 1970 are not known. However, as children withdrew from preschools in subsequent years, the-next-in-line waiting list procedure used by DHR to replace those no longer enrolled again can be considered to be based upon random assignment. These randomized selection procedures were in force for every year of operation since the end of 1970. Of special importance for purposes of the present research is that these same randomized procedures continued to be employed during 1979 and 1980, the two baseline years when the EDDCC and the CSS children attended their respective programs for one or two years. This meant that of the ECDCC and CPS children tested on the evaluative instruments during the spring of 1980, all had been randomly selected by virtue of the waiting list procedure which determined which

preschool they would attend at the start of either 1979 or 1980. In effect then, the children in the ECDCC and CCS Groups by being randomly selected were very likely comparable on many attributes when they started preschool.

The present article did not explicitly mention that randomized procedures governed the means by which one child or another would enter the ECDDC or CCS preschools. The article, however, did say that, “Assignment of children to the ECDCC and other day care contractors (one of which was the CCS program) was based upon which facility was next inline to receive a child.” (See top of page 350.) The words, “next in line to receive a child,” refer, of course, to the assignment based on the randomized and hence unbiased waiting list procedure. On a related matter, the terms, compared to and Comparison Groups, (See pages 351 & 352) may have implied that the DI Group was simply being compared to the CD and Head Start Groups, (See p. 351) and also compared to a third group of children that had no preschool experience. (See p. 352.) The problem is that these two terms do not denote that randomization procedures were in fact applied to the ECDCC and to only one of the other two comparison groups, namely the CCS Group. The Head Start and the No Preschool groups were indeed comparison groups, but the children in these groups did not come from the same subject pool as those children whose parents were eligible for Title XX benefits.

Previous publications of mine dealing with the same 1988 preschool intervention project that WCC reviewed did mention the fact that a randomization procedure was used and it went on to describe the details and consequences of this procedure. (What follows next are statements about the use of randomization procedures with the same children as used in the present study. These statements come from three articles that preceded the 1988 article that was reviewed by WWC. I can send copies of these articles to someone selected by WWC to examine my reactions to the claim that the ECDCC and CSS Groups are not comparable. Please provide this person’s postal or email address.)

In an article published in 1982 (or 6 years earlier than 1988), it is stated that, “Assignment of children to either program (that is, the EDCCC or CSS preschools) was

done by the Tuscaloosa DPS (or DHR) office on a random basis. Whenever an opening arose at either program, the next available family on a waiting list was contacted. The net result (of this randomization process) was that children who were blood relations or living in the same household often ended up attending different preschools, and these circumstances were also true of children living on the same street or in the same housing project.” See p 66, lines 12 to 8, in the article by Sims, Jr., E., V., & Weisberg, P. (1982), entitled, Bringing low SES children in a Direct Instruction preschool up to first grade academic achievement: Comparisons with other preschools and the effect of years in program. Alabama Studies in Psychology 1, 1-17. And 5 years earlier in an article entitled, DI improves drawing skills with preschoolers, written in by E. Sims Jr., P. Weisberg & C Sulentic and published in Direct Instruction News, 1983, 2, 4-5, the following statement was made on page 4, “Assignment of children to these programs (ECDCC & CCS) was done by caseworkers at the local welfare office (i.e. DPS/ DHR) agency on a random, first come, first-served basis.” And 4 years earlier, a similar statement was made that, “The local welfare agency (DPS or DHR) assigned children to this preschool (the CCS Group) or to ours (the ECDDC Group) on a random basis.” The statement was written by me as the author of an article entitled, Reading instruction for poverty-level preschoolers, which appeared in the 1983-84 edition of Direct Instruction News, 3 (1, 16-18, 21).

(Among its objectives, the DI Newsletter emphasized the development and use of instructional programs that resulted in evidence-based outcomes centering on marked improvement in the learning of reading and other content areas for all children, especially those at-risk for academic failure. The editor was Wes Becker who suggested that I should seek publication of my research in a referred journal. A manuscript send to Education and Treatment of Children was accepted.)

The ECDCC and CSS programs were comparable in at least seven different variables, a number that large is not found in early childhood intervention research. The children in both groups:

(1) were placed in their respective preschools on the basis of random assignment;

- (2) had parents or guardians who qualified for the Title XX program of the Social Security Act whose purpose was to help low-income family members find employment;
- (3) attended a preschool located on a university campus;
- (4) attended preschools already in operation for a long term, which, for each preschool, was 10 years;
- (5) were all given standardized tests in 1980 to measure their attainment of several academic skills and their attitude toward school;
- (6) started preschool either in 1979 or 1980, and could attend for two years if they entered at age 4 and they continued for another year when they turned 5 (The extra year was possible because of there were few public kindergartens at the time) or, they entered at either age 4 or at age 5 and stayed for only one year;
- (7) qualified for the US Department of Agriculture's free breakfast and lunch programs.

In addition, there were several other common features between the ECDCC and CCS preschool programs which were based on family demography. These included the presence of a single household head who completed less than 10 school years (high school completion is 12 years), had an extended family that typically consisted of 4 or 5 members where the household head's income was at or below the poverty level and, if sustained employment was found, it was nearly always in unskilled labor.

Despite the strong resemblance of children in the ECDCC and CCS Groups, marked inter-group differences were found on the WRAT in a number of academic measures taken during the 1980 evaluation. A separate statistical analysis revealed highly significant differences. Both the ECDCC children with one year and two years of DI-based instruction far exceeded the CCS children with comparable years of preschool attendance on substantial academic attainments which are those concepts and skills learned by most children by the end of first grade. ECDCC children with one year of DI reading instruction could read an average of 5 WRAT words whereas those with two years read an average of 30 WRAT words. And many of these words were those which were never taught in the DI reading program. The never-presented words included size, weather, finger, awake, cliff, glutton and threshold. For WRAT Spelling, words often

spelled correctly were will, must, him, boy, and cook. In WRAT Arithmetic, these questions could be correctly answered: “Which is more, 42 or 28?” Or, “If you have 3 apples and you get 4 more, how many apples do you have?” And, “if you have 9 marbles and you lose 3, how many do you have?” Some math computations involved solving written addition, subtraction and multiplication problems such as $4 - 1$; $6 + 2$; $5 - 3$; $32 + 24 + 40$; and $4 \times 2 =$.

Another set of tasks dealt with rudimentary skills that most children are able to do at the start of first grade or will be taught early in first grade. In WRAT Reading, these tested skills included the identification of 13 alphabet letters, matching a list of 10 letters found in list of 13 letters and identifying two letters in one’s first name. To reflect the rudimentary skills for WRAT Spelling, 18 simple forms displayed in clearly marked boxes had to be copied in empty boxes directly underneath the drawn forms. In Arithmetic, the skills tested included oral counting of 3 and 5 objects, holding up 3 fingers, and identifying the numbers 3, 5 and 6. On each of the WRAT subtests that exemplified rudimentary skills, there were no reliable differences between the ECDCC and CCS Groups. Because the CCS children were unsuccessful on the substantial academic tasks of the WRAT, but able to succeed on many of the rudimentary tasks, it seemed reasonable that children from another preschool be evaluated to find out if the same skill breakdown would occur. That preschool which agreed to participate was a nearby Head Start (HS) program.

There were actually two different HS programs evaluated with the children in each HS program comparable to the ECDCC and CCS children in several ways. The HS children in each program: (1) attended a long-standing preschool in operation for eight years; (2) attended preschool for one or two years (again the second year was possible because public kindergarten was still limited); and (3) qualified for the US Department of Agriculture’s free breakfast and lunch programs. In addition, the head of the household for HS children shared many of the same demographic characteristics as the parents of the ECDCC and CCS children. Children from one HS program were tested on the WRAT

in September 1980 and the other during 1982-83. The reason for the delayed evaluation will be provided later.

The HS children came from a different subject pool but the assignment of children to the different preschools was not based upon the same randomization procedures done for other two preschools. Thus, comparing the different groups would not represent a true experimental design. However, the comparison of the HS and ECDCC (or HS and CCS) Groups did meet the demands of a quasi-experimental design which permitted appropriate statistical evaluations. It turned out that the HS children showed the same WRAT outcome as the CCS children: acceptable performance on the rudimentary skills but almost no success on the substantial skills. On the other hand, the ECDCC children's performance was equally strong on both types of skills.

Since the WRAT assessments taken with the ECDCC, CCS and HS Groups provided outcome data on the contribution of preschool programs to mastery of rudimentary and substantial skills, it was instructive to consider what children who never attended preschool were able to do on these skills. For one of the No-Preschool Groups, five year-old children just beginning kindergarten were selected from three city schools which already had public kindergarten programs. Although similar in age to the 4 to 5 year-old pre-kindergarten children from the three preschools already mentioned, the children selected from these public kindergarten programs never attended any preschool. Another group of children who had begun first grade, but who had neither attended pre-kindergarten nor kindergarten were selected from two local schools. Thus, unlike the children in the ECDCC, CCS and HS Groups, who could acquire two consecutive years of schooling before first grade (starting from age 4 and ending at age 6), the comparable No-Preschool children had no preschool experience before they started first grade. The parents of children from both age groups confirmed that their five year older children, now in kindergarten, never attended preschool or that their six year-olders, now in first grade, neither attended pre-kindergarten or kindergarten. During the times their children were not attending pre-kindergarten or not attending pre-kindergarten plus kindergarten,

the parents said that their children were “looked after” either by the parent herself or by close relatives.

All children in the two No-Preschool Groups received free meals. The schools attended by the starting first-graders without any preschool experience were the same schools attended by many of the children who had previously attended the ECDCC, CSS and HS programs. The children starting kindergarten or first grade children were tested on the WRAT in September of 1980. The outcome for both No-Preschools Groups replicated the rudimentary–substantial skill pattern found with the CCS and HS groups. Neither of the two No-Preschool Groups did well on the substantial parts of WRAT Reading, Spelling and Arithmetic. On the rudimentary skills, the older 6 year-old, No-Preschool children, who were in beginning first-grade classes, but who did not attend pre-kindergarten or kindergarten, did somewhat better than the younger 5 year-old No-Preschool children who were attending public kindergarten and did not attend pre-kindergarten. Performance favoring age over preschool experience, although suggestive, did not result in statistically significant differences.

The absence of a difference between rudimentary and substantial skills for the ECDCC children occurred during the 1980 WRAT evaluation and for every year the WRAT was given. That is, the sameness in performance occurred for the testing periods from 1978 to 1985 for kindergarten-aged children and from 1977 to 1985 for the first-grade starting children. That means the result was replicated for the 78 kindergarten-aged children and for the 65 first-grade starting children, as reported in Figure 3 of the article. And, the absolute level of substantive abilities was always greater in Reading and Spelling for those DI children having two years of the DI Reading Mastery (RM I & II) programs than those having one year of that program i.e. just RM I.

On the other hand, there was a strong and consistent discrepancy in WRAT performance for the two kinds of abilities for the CCS, HS and No-Preschool Groups. Because statistical evaluation confirmed a lack of any differences among these groups for either the rudimentary skills or the substantive skills, the appropriate group data for the

CCS, HS and No-Preschool Experience Groups were merged and the resulting group was identified as the Non-DI Group. The opportunity to check on the divergence outcome with a much larger sample size became a possibility when many more HS children could be evaluated during 1982 and 1983. The larger N's are reported separately for HS during the 1982-83 evaluation years for WRAT Reading in Table 3, and the results reveal the same performance discrepancy phenomena. The same result occurred for WRAT Spelling and Arithmetic for both the merged Non-DI Group and for the 1982-83 HS Group, but the sample sizes in Table 4 are not shown.

Academic objectives for pre-kindergarten children, such as those in HS, have centered on the promotion of rudimentary skills. Learning to identify alphabet letters and, perhaps, to provide practice in writing them, were and remain one of HS major objectives. Most likely, both past and current HS officials and staff, contend that beginning reading instruction should not be a pre-kindergarten goal but should await the start of first grade. Some might qualify that belief and say it should start in kindergarten. However, almost all early childhood educators will insist that pre-kindergarten is not the time to teach reading. One of the findings of this study is that the RM I program can teach pre-kindergarten children to decode words and to begin the process of learning to read stories and write the answers to literal comprehension questions. These outcomes occurred every time these aged children finished RM I.

If reading instruction was attempted in HS, it is probably the case that these few attempts to teach reading did not fare well. Some may argue that HS children are simply not able to succeed on tasks dealing with substantive tasks. And there are data to support this proposition. In part of the Head Start Variation Project conducted in 1963, the WRAT was used as one of the instruments to evaluate academic performance with HS children. According to the Project's author, I. Weisberg (no relation to me), HS children were unable to do any of the WRAT substantive tasks. Instead of saying something to the effect, "Yes, our kids did not do well, but let's find an instructional program that can teach these skills, so that when another evaluation is done we'll be able to show that our kids can do better on these important skills." That never happened. Instead, the data

showing the absence of substantive skill performance was discarded and instead the 1963 evaluation was based solely on the remaining rudimentary skills of the WRAT.

Some might argue that continued attempts to teach reading to young, poverty-level children only serves to frustrate them and the result will be that they withdraw from such activities altogether. That may be the case if an ineffectual reading program is used. That is, for example, one that suffers from poor selection and sequencing of examples, fails to provide relevant practice and correction procedures, lacks appropriate teacher-child interactions, and doesn't provide details on how to reinforce a child who makes improvements in skill development. A widely used norm-referenced test of school achievement called Animal Crackers was used in the present study. The results showed that the DI-taught children scored significantly higher than the Non-DI children on the students' perception of how well they were doing in school (the Self Confidence subtest) and they also attained a reliably higher overall motivation score. (See p 360)

A key question is what preschool activities should be offered to young children who are likely to have future difficulties in learning to read. One tactic is to provide reading-readiness activities. Providing the opportunity to engage in some of the rudimentary skills already discussed, receives a great deal of attention with HS children. So does modeling and encouraging "reading-like" behaviors. The latter can include going to the book area and selecting a book, learning to hold it right side up, finding out how to turn the pages properly, looking at the pictures and discussing them. Also, listening to someone read stories to learn about the characters, plot and then to answer simple questions is likely acceptable practice. Except for learning to read several common words that are associated with pictures, strategies for figuring out how to decode words is usually not taught. With this reading-readiness emphasis, actual reading is not seriously taught in preschool. It is during first grade when judgments are made about the effectiveness of the former readiness activities. Typically the most effective preschool readiness program is the one that has best served to facilitate or promote the learning of reading in the program adopted in first grade.

Another possibility is not to wait until first grade but begin reading instruction in preschool. This was done from 1970 to 1975 when the ECDCC staff taught reading to preschoolers from poverty-level backgrounds through whole-word, look-say recognition tasks that largely focused on selecting pictures that represented common nouns and pairing them with words. The reading gains were small and not sustained, and the reasons for the failure are described in the article.

Direct Instruction reading programs were adopted in 1976 and were continued until 1990. The majority of the ECDCC children who started the first level of the DI reading program, (called Reading Mastery or RM I which contains 160 lessons) were 4 years-old. As shown in Figure 1, they were able to correctly read or decode 427 words in their first preschool school year. Notice that during the beginning sets of 20 lessons, the rate in which new words were introduced in each lesson was low, but the number positively accelerated as the number of lessons increased. If these pre-kindergarten children stayed for a second year, when they were now kindergarten-aged children, they were taught the second level of Reading Mastery or RM II, which also contains 160 lessons. In the RM II program, 1001 new words were taught. Now the rate of new word introduction, as shown in Figure 1 is linear, meaning that these older children could handle about 100 new words introduced every 20 lessons. After finishing RM I and II, a total of somewhat less than 1500 words had been taught to at-risk children before they have set foot in first grade.

Aside from finding out how well preschool children are able to learn to read by testing them on the words they were taught, another means is to use a standardized, norm-reference test where the effects of different programs can be compared. The WRAT serves this purpose. Although it is frequently used with older children, it can be used to determine the extent of academic achievement in pre-first grade children. Raw scores can be converted into grade equivalent (GE) values and used for children as young as four and percentiles are available starting at age 5. As shown in Figure 3, at the end of one pre-kindergarten year where reading from the RM I program was taught across several different program years, the percentile range in WRAT reading was between the 76 and

the 96th At the end of a second year of teaching reading using the RM II program, the range for the different program years was now between the 98th and 99.9th percentile.

In the study of early readers, the sheer number of words that can be read by preschool children has been taken as a sign of reading success. Durkin identified early readers and called them “pencil and paper kids.” They came from middle-class backgrounds and showed an unusually strong interest in words and were presumed to be self taught readers. A preschool based on a language arts curriculum was started by Durkin in which 30 words were taught the first year and 124 more words the second year. The words had high interest value and were mostly nouns that could be represented by pictures. Not taught were words that are important for sentence construction (e. g., that, in, when, there, had, and, we) or printed words that are used as part of a question (e. g., how, who, which when). Thus, it is not likely that measures of sentence or passage comprehension were taken during a reading lesson.

The WRAT reading subtest provides a list of words that can be presented to young children. Although the WRAT provides a good yardstick for measuring decoding skills, it fails to assess reading comprehension performance. The number of words and sentences in the last stories from the RM I and II programs gives an idea of what the ECDCC children can do in decoding and comprehension tasks. Children who read the last RM I story from lesson 160 (A man liked to run fast) read 90 words and 14 sentences, which is an incredible feat for 5 year olders from poverty-level backgrounds. They also must answer oral comprehension questions as they read the story and afterwards they independently answer printed comprehension questions based on the story. The last RM II story (Leaving the land of peevish pets) contains over 375 words and about 45 sentences. There are also 10 printed comprehension questions that these just turned 6 year olders are required to answer.

Because these children were able to read first grade material, standardized tests developed for end of first grade children were used. These tests are shown in Figure 4 and the first grade-starting six year olders always performed above average on the first grade subtests. The breakdown of scores for three MAT subtests from two different aged

children (starting 5- and 6-year olders) shows an important pattern. Children with one year of DI reading scored above average in word analysis, which reflects decoding skills. However, their performance on word knowledge tasks and sentence and story reading, which require difficult comprehension skills, is close to the 20th percentile. Children with two years of reading do well on every subtest. It appears that what is critical is not the age when reading instruction begins but the number of years of RM I instruction. That is, younger children with one year of RM I instruction show the same pattern of subtest performance as older children who also had one year of instruction.

The Direct Instruction Model was one of the sponsors in the US Department of Education's Follow Through (FT) Project. The 3rd grade academic performance on the MAT was taken as a major index of the children's attainments in Reading, Math and Language. It was left to the sponsor to decide the grade level their FT model could begin. Children started in kindergarten with the DI Model and followed until the end of 3rd grade had 4 years of the Model (K to 3rd grade) while those who started in 1st grade had 3 years of the DI Model. Superior MAT achievement was found for the K-starting children relative to 1st-starting children. The present research showed that the RM I program could be properly and consistently implemented with pre-kindergarten children and create strong decoding skills and generate the necessary skills for dealing with literal comprehension abilities.

From: Paul Weisberg [weisberg@bama.ua.edu]
Sent: Wednesday, May 21, 2008 6:26 PM
To: info@whatworks.ed.gov
Subject: Seek feedback re an article reviewed by WWC
Attachments: WWC.doc

To Whom It may Concern:

A publication of mine was reviewed by WWC in the May 21, 2007 issue of the WWC reports. Under the section on "Intervention: Direct Instruction," a list of publications which dealt the WWC standards was provided. My research was found not to have satisfied these standards. The information provided by WWC in the footnote related to my research (footnote 12) said that the research suffered from having, "incomparable groups: the intervention and comparison groups cannot be considered equivalent at baseline, even with the use of covariates in the analysis."

I wish to take issue with the claim that the intervention and comparison groups in my research were not comparable. In the attachment, I have provided details to show that randomization procedures were used to establish group comparability. The attachment also discusses several characteristics about my research that I trust will be very useful to those interested in providing Direct Instruction reading instruction to pre-kindergarten and kindergarten-aged children. Those interested in early intervention should find the norm-referenced reading test outcomes useful. The data reflect preschool and kindergarten student reading performance on an end-of-first grade level, not kindergarten level tests. One finding of special importance is the nature of the differences in decoding and comprehension skills in preschool children who had either one or two years of Direct Instruction reading instruction.

A cover letter and the same attachment enclosed herein was mailed to WWC via special delivery on May 9, 2008. As of yet, I have not received a reply. Now I am contacting WWC through email and hope to receive a reply.

Have a good day.

Paul Weisberg

Paul Weisberg
Dept of Psychology
Box 870348
University of Alabama
Tuscaloosa, AL 35487
Office: Cell phone (205) 310-4568
Home: (b)(6)

From: What Works
Sent: Tuesday, May 27, 2008 4:31 PM
To: 'Paul Weisberg'
Cc: What Works
Subject: Issue 505: Seek feedback re an article reviewed by WWC

Dear Mr. Weisberg,

Thank you for contacting the WWC. We are committed to ensuring the accuracy of information contained in WWC intervention reports. In light of the question you raise, we will examine the decisions made when rating the Weisberg (1988) study "Direct Instruction in the preschool" to determine whether the WWC standards of baseline equivalence were applied correctly to this study. We will let you know the results of this review. Please note, however, that these reviews take between 60 and 90 days to complete.

Thank you for your time,
What Works Clearinghouse

-----Original Message-----

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Paul Weisberg
Dept of Psychology
Box 870348
University of Alabama
Tuscaloosa, AL 35487
Office: Cell phone (205) 310-4568
Home: (b)(6)

From: WhatWorks

Sent: Thursday, July 03, 2008 1:57 PM

To: 'weisberg@bama.ua.edu'

Subject: re: Seek feedback re an article reviewed by WWC

Dear Dr. Weisberg,

Thank you for the informative letter. We reviewed your concerns and established that the original WWC qualification refers to the comparison between Direct Instruction (DI) one-year reading group and DI two-year reading group (presented in tables 1 and 3; Weisberg 1988: 351, 359).

We do not think that the concerns apply to the comparison among the DI, Non-DI, and Head Start groups (presented in table 2, p.356). For these comparisons, we think it is likely that the WWC reviewers were unable to establish initial comparability among groups, because pretest data for the outcomes of interest (WRAT reading subtest scores) were not provided in the article (the WWC Early Childhood Education protocol requires that the groups must be roughly equivalent with regard to the pretest of the outcome measures or its proxy). To be sure, we have asked a different set of reviewers to re-examine the study. These reviewers may contact you for additional information if necessary. Either way, we will inform you about the results of our investigation.

Please let us know if you have any other questions. Thank you for contacting the WWC.

What Works Clearinghouse

The What Works Clearinghouse was established by the U.S. Department of Education's Institute of Education Sciences to provide educators, policymakers, researchers, and the public with a central and trusted source of scientific evidence of what works in education. For more information, please visit <http://ies.ed.gov/ncee/wwc/>.

From: What Works

Sent: Tuesday, May 27, 2008 4:31 PM

To: 'Paul Weisberg'

Cc: What Works

Subject: Issue 505: Seek feedback re an article reviewed by WWC

Dear Mr. Weisberg,

Thank you for contacting the WWC. We are committed to ensuring the accuracy of information contained in WWC intervention reports. In light of the question you raise, we will examine the decisions made when rating the Weisberg (1988) study "Direct Instruction in the preschool" to determine whether the WWC standards of baseline equivalence were applied correctly to this study. We will let you know the results of this review. Please note,

however, that these reviews take between 60 and 90 days to complete.

Thank you for your time,
What Works Clearinghouse

-----Original Message-----

From: Paul Weisberg [mailto:weisberg@bama.ua.edu]
Sent: Wednesday, May 21, 2008 6:26 PM
To: info@whatworks.ed.gov
Subject: Seek feedback re an article reviewed by WWC

To Whom It may Concern:

A publication of mine was reviewed by WWC in the May 21, 2007 issue of the WWC reports. Under the section on "Intervention: Direct Instruction," a list of publications which dealt the WWC standards was provided. My research was found not to have satisfied these standards. The information provided by WWC in the footnote related to my research (footnote 12) said that the research suffered from having, "incomparable groups: the intervention and comparison groups cannot be considered equivalent at baseline, even with the use of covariates in the analysis."

I wish to take issue with the claim that the intervention and comparison groups in my research were not comparable. In the attachment, I have provided details to show that randomization procedures were used to establish group comparability. The attachment also discusses several characteristics about my research that I trust will be very useful to those interested in providing Direct Instruction reading instruction to pre-kindergarten and kindergarten-aged children. Those interested in early intervention should find the norm-referenced reading test outcomes useful. The data reflect preschool and kindergarten student reading performance on an end-of-first grade level, not kindergarten level tests. One finding of special importance is the nature of the differences in decoding and comprehension skills in preschool children who had either one or two years of Direct Instruction reading instruction.

A cover letter and the same attachment enclosed herein was mailed to WWC via special delivery on May 9, 2008. As of yet, I have not received a reply. Now I am contacting WWC through email and hope to receive a reply.

Have a good day.

Paul Weisberg

Paul Weisberg
Dept of Psychology
Box 870348
University of Alabama

Tuscaloosa, AL 35487

Office: Cell phone (205) 310-4568

Home: (b)(6)

From: WhatWorks
Sent: Tuesday, August 05, 2008 2:35 PM
To: 'weisberg@bama.ua.edu'
Subject: What Works Clearinghouse
Dear Dr. Weisberg,

We wanted to update you on the status of our response to your inquiry. WWC reviewers are still looking into the issue you raised. We will be sure to inform you about the results of this investigation.

Please let us know if you have any other questions.

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From: WhatWorks
Sent: Thursday, July 03, 2008 1:57 PM
To: 'weisberg@bama.ua.edu'
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Paul Weisberg

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Dept of Psychology
Box 870348
University of Alabama
Tuscaloosa, AL 35487
Office: Cell phone (205) 310-4568
Home: (b)(6)

From: What Works
Sent: Tuesday, November 04, 2008 2:41 PM
To: 'weisberg@bama.ua.edu'
Subject: WWC Response to Your Inquiry

Dear Dr. Weisberg,

This e-mail responds to your May 21, 2008 communication regarding the WWC review of your 1988 study "Direct instruction in the preschool." The concern you raised related to the WWC finding that the intervention and comparison groups in the study were not comparable and, thus, that the study did not meet evidence standards. As we indicated in our e-mail dated July 3, 2008, the WWC did submit this study for re-review by a team of WWC reviewers who were not involved in previous reviews of the study. The team also reviewed the information you submitted in October 2008 in response to our author query. The review team concluded that the study did not meet WWC standards for two reasons: (1) this quasi-experimental study did not demonstrate baseline equivalence and (2) there was a confound between treatment and center.

Given the procedures used to assign treatment and control status, this study is considered a quasi-experimental design. As specified in the review protocol for Early Childhood Education interventions (the protocol can be downloaded here: http://ies.ed.gov/ncee/wwc/PDF/ECE_protocol.pdf), studies that use a quasi-experimental design must demonstrate that the treatment and comparison groups were equivalent in terms of the key outcome measures before the intervention was implemented. Thus, the first reason that this study did not meet WWC standards is that the study was unable to demonstrate that the treatment and comparison groups were similar at baseline.

The second reason that the study failed to meet WWC standards is that there is a confound between treatment and center. In this case, the treatment (Direct Instruction) was offered in one center, and thus we are not able to disentangle the effect of the curriculum from any center effects that may be present. As described in the WWC standards (which can be found here: http://ies.ed.gov/ncee/wwc/pdf/study_standards_final.pdf), studies that have this type of confound do not meet WWC standards.

I hope this information has addressed your concerns.

Sincerely,

What Works Clearinghouse