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Reported Prevalence of Evidence-Based Instructional Practices in Special Education

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The federal mandate for use of evidence-based practice in schools focuses attention on the frequently discussed research-to-practice gap in education. The current study examined the frequency with which evidence-based practices are engaged in the education of pupils with disabilities. In sum, 174 special education teachers and 333 school psychologists completed a 12-item survey in which they rated the frequency of various practices used in special education. Respondents reported that direct instruction is the most frequently used instructional methodology and that perceptual-motor training is the least frequent. However, some practices with little empirical support (e.g., modality instruction) are reportedly used with some frequency, and special education teachers reported using ineffective approaches (social skills training) as frequently as they did those approaches with a strong research base (applied behavior analysis). Thus, these data present some reason for optimism, although special education does not appear to be immune to a research-to-practice gap.

Keywords: *phonological awareness; reading; intervention; response to intervention; defining and diagnosing disabilities; children at risk*

Scholars and policy makers frequently lament the now-famous research-to-practice gap in education and speculate why it exists (Espin & Deno, 2000; Forman, Smallwood, & Nagle, 2005; Greenwood, 2001; Landrum & Tankersley, 2004). Some have suggested that the gap is due in part to inaccessibility of research to classroom teachers, the inability of researchers to draw causal connections within studies published in professional journals (Kennedy, 1997), and a lack of trust among teachers of claims made from research (Boardman, Arguelles, Vaughn, Hughes, & Klingner, 2005). Regardless of the presumed cause, the gap between research and practice in education is of critical importance because research should be the foundation from which teaching and learning practices are developed and improved (Cochran-Smith, 2004).

The federal government became directly involved in the research-to-practice debate with the mandate for evidence-based practices in the No Child Left Behind Act. An evidence-based practice was defined as one supported by empirical research and professional wisdom so that research-based instructional methodologies could be implemented in the unique systems represented by each preK–12 public school (Whitehurst, 2002). Moreover, the federal mandate also created the What Works Clearinghouse (see http://www.whatworks.ed.gov) as a source of evidence-based practices that would be easily accessible to parents, teachers, and administrators. However, the selection of instructional methodologies remains more dependent on the professional wisdom aspect of *evidence-based* than on the *empirically supported* component (Whitehurst, 2002).

Although the focus of most conversations regarding the research-to-practice gap is education in general, the same lack of translation between research and classroom practices is demonstrated in special education research (Browder & Cooper-Duffy, 2003; Carnine, 1997; Cook, Landrum, Tankersley, & Kaufmann, 2003; Espin & Deno, 2000). Special education has a long history of individual success stories (Abbott, Walton,

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Tapia, & Greenwood, 1999; Bijou, 1970), but meta-analytic research has revealed only small to even negative effects associated with the learning outcomes of students participating in special education (Kavale & Forness, 1999). Perhaps these disappointing outcomes are related to special education teachers' use of instructional practices that lack an empirical basis (Cook et al., 2003).

Given the extensive literature on effective instructional practices for students with disabilities (Gersten, Schiller, & Vaughn, 2000; Kavale & Forness, 1999, 2000; Swanson, 2000; Swanson & Sachse-Lee, 2000), any research-to-practice gap in special education is unlikely due to a lack of research about what constitutes an effective practice (Ysseldyke, Christenson, & Kovaleski, 1994). Forness (2001) summarized meta-analytic research by identifying those practices with large mean effect sizes—mnemonic strategies (1.62), behavior modification (0.93) and direct instruction (0.84)—and those with a moderate mean effect size, such as formative evaluation (0.70). Some instructional methodologies persist despite data that convincingly demonstrate ineffectiveness (Kavale & Forness, 2000). For example, a mean effect size of 0.08 was reported for perceptual-motor training, 0.14 for modality instruction, 0.21 for social skills training, and 0.39 for psycholinguistic training. These coefficients are small, but their use continues to be defended in a manner that seems to place personal beliefs ahead of research data (Kavale & Forness, 2000).

It is unclear why instructional approaches that result in small effects continue to be used in practice. Perhaps one reason why the ineffective methods continue is that teachers prefer informal sources of information over research when selecting instructional methodologies (Landrum, Cook, Tankersley, & Fitzgerald, 2002). In fact, Kauffman (1996) suggested an inverse relationship between empirical support for an instructional methodology and teacher acceptability. Ayres, Meyer, Erevelles, and Park-Lee (1994) and Agran and Alper (2000) used surveys to examine barriers to effective practices within general, special, and inclusive educational environments, and they found a direct link to implementation difficulty with inconsistently implemented evidence-based practices. Vaughn, Levy, Coleman, and Bos (2002) synthesized observational studies and so found generally poor reading instruction for children with disabilities. However, these studies were limited in scope by respondents (e.g., schools known for innovative practices; Ayres et al., 1994), specific instructional procedures (e.g., behavior analysis; Agran & Alper, 2000), and curriculum content area (e.g., reading instruction; Vaughn et al., 2002).

Information from practitioners about their practice could be important to reform efforts that deal with a research-to-practice gap, because successful reform movements address the attitudes, beliefs, and behaviors of those who actually implement the change (Sarason, 1996) and because individuals who are implementing the change have to first incorporate new techniques into their skill repertoire (Hord, Rutherford, Huling-Austin, & Hall, 1987). Thus, perhaps the first step in addressing any gaps between research and practice is to determine practitioner perspectives and to point out practices that are effective and ineffective. In this study, we examined the reported use of evidence-based practices in special education by surveying a random selection of special education teachers and school psychologists to inquire about the prevalence of practices found to have large, medium, and small effects in previous meta-analytic research. The following research questions guided this exploratory study: First, how frequently are evidence-based practices reportedly engaged in the education of pupils with disabilities? Second, are practices with large effects reportedly used more frequently than those shown to be ineffective when educating pupils with disabilities?

Method

Participants

Surveys were sent to 500 special education teachers and 1,000 school psychologists randomly selected from the teacher membership of the Council for Exceptional Children and the school practitioner membership of the National Association of School Psychologists. We selected school psychologists as respondents because we sought a profession that worked closely with special education teachers and that could provide an observational approach. Observing behavior would be preferable to using self-report methods, and school psychologists could provide data based on observations of instructional practices rather than totally on self-report. The number of surveys sent was based on the maximum number of addresses that each association provided. A total of 174 special education teachers and 333 school psychologists returned the surveys, which resulted in a 34.8% and 33.3% return rate, respectively, and a total return rate of 33.8%.

The majority of the respondents who were special education teachers were females ($n = 157$, 90.2%; $n = 17$ males, 9.8%) and Caucasian ($n = 159$, 91.4%). The number of years served as a special education teacher ranged from 1 to 35, with a mean of 14.10 ($SD = 8.82$). Four respondents were African American (2.3%); 3 (1.7%) were Hispanic; 4 were Native American (2.3%); 1 was Asian American (0.6%); and 1 selected *other* (0.6%). Respondents were from 41 different states, with 82 (47.7%) who described their community as suburban, 52 (30.2%) who selected rural, and 38 (22.1%) who reportedly lived in an urban community. Moreover, the respondents were mostly working in a resource room ($n = 65$, 37.6%) or a self-contained classroom ($n = 65$, 37.6%), with 20 (11.6%) respondents indicating that they were consultants; 23 (13.3%) selected the *other* category, including inclusion settings and community/work transition activities. A majority of the respondents indicated that they taught children diagnosed with a specific learning disability ($n = 121$, 69.5%); 83 (47.7%) taught children with emotional-behavioral disorders; 83 (47.7%) responded that they taught children identified as *other health impaired*; 66 (37.9%) taught children diagnosed with autism; and 64 (36.8%) taught children with mental retardation. An additional 64 respondents (36.2%) taught children from other disability categories (e.g., hearing impaired, visually impaired, and speech and language impaired). It should be noted that respondents could select up to four options.

Of the 333 school psychologists who replied, 236 (70.9%) were female; 89 (26.7%) were male; and 8 (2.4%) omitted this demographic item. Years of service as a school psychologist for the respondents ranged from 1 to 40, with a mean of 16.37 ($SD = 9.76$). The majority were again Caucasian ($n = 301$, 90.4%) with 11 (3.3%) being African American, 8 (3.4%) Hispanic, 4 (1.2%) Asian American, and two (0.6%) selecting the *other* category. An additional 7 (2.1%) respondents omitted this demographic item. Respondents were from 43 states, with 155 (48.1%) being from a suburban setting, 88 (27.3%) from an urban setting, and 79 (24.5%) from a rural setting.

Procedure

Two 12-item surveys were used for the study, the first 8 items of which asked respondents to rate the frequency of various practices used in special education. The items were generated by identifying practices as *effective*, *moderately effective*, and *ineffective* based on meta-analytic research. Thus, included in the survey were three practices identified as being effective for children with disabilities, one that was found to be moderately effective, and four that had been shown to have small average effect sizes (Forness, 2001; Kavale & Forness, 2000), each with a short definition taken from Kavale and Forness (2000; see Table 1). Special education teachers were asked to rate how frequently they use each practice, using a 5-point Likert-type scale with *almost every day*, *at least once a week*, *once or twice a month*, *rarely*, and *almost never* as the choices. It was possible for respondents give multiple practices the same rating. School psychologists were asked to rank-order the eight practices based on how often they observed the strategies in classrooms for individuals with special needs. The most frequently observed would receive a 1, and the least frequently observed would be rated an 8. Thus, unlike the special education teacher survey, the psychologist survey ensured that each ranking (1–8) would be used only once. In addition to the eight survey items associated with the special education practices, four demographic questions were included, which inquired about gender, ethnicity, years experience, type of community (rural, urban, or suburban), classroom setting, and the state where the respondent is employed.

As mentioned, potential survey respondents were identified by contacting the Council for Exceptional Children and the National Association of School Psychologists. Special education teachers were obtained by randomly selecting 500 Council for Exceptional Children members who were practicing teachers. The 1,000 school psychologists were obtained by receiving a random selection of National Association of School Psychologists members who were practicing school psychologists. Administrators and trainers were excluded from both pools.

Once the respondent pool was formed, the surveys were mailed to those selected, along with cover letters and self-addressed stamped envelopes to return the completed surveys. No identifying information was included in the survey, and there was no coding of envelopes or surveys. One follow-up reminder (a postcard) was sent to each potential respondent 3 weeks after the survey was sent. Because of restrictions placed by the professional organizations and an institutional review board for human participant research, no follow-up notification or contact was used to increase response rates, other than the reminder postcard.

Data Analyses

The first research question asked about the frequency with which practices with large effects were

Table 1
Special Education Practices Included in the Survey, Definitions, and Average Effect Sizes (ESs)

Practice	Definition Provided in Survey	Mean ES
Applied behavior analysis	Systemic application of behavioral principles (e.g., antecedent, behavior, consequence) to change student learning and behavior to a meaningful degree	0.93
Direct instruction	Academically focused, teacher-directed learning with sequenced, structured materials and high levels of student responding	0.84
Formative evaluation	Systematically measuring student progress to instructional goals during instruction and modifying instruction as necessary (e.g., curriculum-based measurement)	0.70
Mnemonic strategies	Using elaborative learning strategies (e.g., keywords) to improve memory of facts	1.62
Modality training	Providing instruction for individual children based on their preferred modality (visual, auditory, kinesthetic)	0.14
Perceptual-motor training	Programs designed to improve academic skills by enhancing perceptual-motor abilities	0.08
Psycholinguistic training	Determining difficulties in auditory and visual-motor receptive, integrative, and expressive abilities and improving academic skills by remediating the weakness	0.39
Social skills training	Programs that remediate social skills deficits through observation, practice, and reinforcement of appropriate social behaviors	0.21

Note: Definitions and mean effect sizes from Kavale and Forness (2000).

engaged in the education of individuals with disabilities. Therefore, descriptive statistics were computed for the special education and school psychology respondents. The second question inquired if effective practices were used more frequently than those shown to be ineffective when educating children with disabilities. This question was addressed by conducting a Friedman nonparametric test with the frequency data for each group of respondents. Because two analyses were conducted, we used a conservative alpha level of less than .01 to demonstrate significant results. Next, we created a priori groupings of the instructional strategies into three dyads, each consisting of one practice with a large average effect size and one with a small average effect size, as defined by Kavale and Forness (2000). The first dyad dealt with instructional approaches and included direct instruction (with the large effect) and modality instruction (with the small effect). The second dyad comprised methods to enhance encoding and retrieval of information, and it contained mnemonic strategies and psycholinguistic training as the large and small average effect sizes, respectively. Finally, methods for behavioral difficulties were paired with applied behavior analysis as the strategy with a large average effect size and with social skills training as that with the small average effect size. The reported frequency of the two practices within each dyad was examined with a Wilcoxon signed-rank nonparametric analysis. A separate analysis was conducted for respondents who were special education teachers and for those who were school psychologists. Therefore, six analyses were completed, which resulted in a Bonferroni corrected alpha level of .008, necessary for statistical significance.

Results

The first research question inquired about the reported frequency use of practices with large effects in the education of children with special needs. As seen in Table 2, almost 90% of the respondents indicated that they used direct instruction at least once a week. Approximately 75% of the respondents also reported a similar frequency for modality instruction, formative assessment, and social skills training. Moreover, 70% of the respondents indicated they used applied behavior analysis at least weekly. The two least frequently reported approaches were psycholinguistic training and perceptual-motor training.

School psychologists also rated direct instruction as the most frequently used strategy, with a mean ranking of 1.59 ($SD = 1.34$), followed by formative assessment ($M = 3.82$, $SD = 2.05$), mnemonic strategies ($M = 4.33$, $SD = 1.94$), social skills training ($M = 4.62$, $SD = 1.78$), applied behavior analysis ($M = 4.79$, $SD = 2.11$), modality instruction ($M = 4.90$, $SD = 1.84$), psycholinguistic training ($M = 5.71$, $SD = 2.01$), and perceptual-motor training ($M = 6.55$, $SD = 1.60$).

The second research question asked whether practices with large effects were reportedly used more frequently than those shown to be ineffective when educating children with disabilities. A Friedman nonparametric test was used to examine the rank order of

Table 2
Frequency of Responses for Special Education Survey

	Almost Never		Rarely		Once or Twice per Month		At Least Once a Week		Almost Every Day	
Practice	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%
Applied behavior analysis	16	9.2	16	9.2	20	11.5	27	15.5	95	54.6
Direct instruction	3	1.7	9	5.2	4	2.3	11	6.3	145	83.3
Formative assessment	2	1.1	7	4.0	29	16.7	69	39.7	64	36.8
Mnemonic strategies	6	3.4	19	10.9	40	23.0	57	32.8	51	29.3
Modality instruction	8	4.6	11	6.3	13	7.5	40	23.0	99	56.9
Perceptual-motor training	43	24.7	55	31.6	17	9.8	26	14.9	29	16.7
Psycholinguistic training	41	23.6	37	21.3	24	13.8	26	14.9	44	25.3
Social skills training	9	5.2	15	8.6	18	10.3	35	20.1	97	55.7

the eight instructional and behavioral methodologies among special education teachers, and it resulted in a significant effect, $\chi^2(df = 7, n = 164) = 341.55, p < .001$. The comparison of behavioral approaches resulted in applied behavior analysis being rated higher than social skills 49 times, with social skills training being rated higher 41 times, and with 84 ties. The resulting Wilcoxon signed-rank test was not significant, $z = 1.46$, $p = .15$. The comparison of instructional approaches resulted in direct instruction being rated higher than modality instruction 68 times and modality instruction being rated higher 18 times, with 83 ties. The resulting signed-rank test was significant, $z = 4.22$, $p < .008$. Finally, mnemonic strategies were rated higher than psycholinguistic training 94 times; psycholinguistic training was rated higher 32 times; and there were 46 ties. The resulting signed-ranks test was significant, $z = 5.64$, $p < .008$.

Frequency results for the school psychologist respondents were also analyzed nonparametrically and resulted in a significant Friedman test, $\chi^2(df = 7, n = 322) = 819.18, p < .001$. Applied behavior analysis was rated as being more frequent than social skills training 141 times; social skills training was rated as being more frequent 168 times; and there were 16 ties—all of which resulted in a nonsignificant effect, $z = 1.20$, $p = .23$. Direct instruction was rated as being more frequent than modality instruction 294 times; modality instruction was rated as being more frequent 25 times; and there were 5 ties—all of which resulted in a significant effect, $z = 14.02$, $p < .008$. Finally, regarding the dyad that examined encoding and retrieval of information strategies, mnemonic strategies were rated as being more frequent than psycholinguistic training 223 times; psycholinguistic training was rated as being more frequent 25 times; and there were 5 ties—all of which also resulted in a significant effect, $z = 7.51$, $p < .008$.

Discussion

The current data provide cause for concern and optimism. The first research question asked about the perceived frequency of evidence-based practices in the education of pupils with disabilities. Listed in Table 3 is the rank order of reported frequency of use, observed frequency, and magnitude of mean effect size from meta-analytic research. The instructional strategy with the smallest mean effect size was reported the least frequently, and direct instruction was the most commonly rated technique by both groups of respondents. However, the other two strategies that resulted in strong effect sizes in meta-analytic research—mnemonic strategies and applied behavior analysis—were not as favorably rated. Approximately 70% of the special education teacher respondents indicated that they engage in applied behavior analysis at least on a weekly basis, and 60% reported using mnemonic strategies at least once per week. School psychologists were less consistent with the teacher-reported frequency in that mnemonic strategies were listed third and applied behavior analysis was ranked fifth.

The only intervention with a small effect size that was rated within the top three most frequently used approaches was social skills training. Approximately 75% of the special education teachers rated social skills training as at least a weekly activity despite a mean effect size of .21 (Kavale & Forness, 2000). Thus, additional research is needed regarding the use of social skills training with children with special needs to determine why it is perceived to be commonly used and what positive effects are noted by practitioners.

The second research question compared practices with large effects to those that have been shown to be ineffective when educating pupils with disabilities.

Table 3
Rank Order of Frequency for the Survey Respondents and of Effectiveness as Listed by Kavale and Forness

Rank	Special Education Teachers	School Psychologists	Kavale and Forness
1	Direct instruction	Direct instruction	Mnemonic strategies[a]
2	Modality instruction	Formative assessment	Applied behavior analysis[a]
3	Social skills training	Mnemonic strategies	Direct instruction[a]
4	Formative assessment	Social skills training	Formative assessment[b]
5	Applied behavior analysis	Applied behavior analysis	Psycholinguistic training[c]
6	Mnemonic strategies	Modality instruction	Social skills training[c]
7	Psycholinguistic training	Psycholinguistic training	Modality instruction[c]
8	Perceptual-motor training	Perceptual-motor training	Perceptual-motor training[c]

Note: Kavale and Forness (2000).
a. Intervention with a large effect.
b. Intervention with a medium effect.
c. Intervention with a small effect.

This comparison is potentially important when considering that instructional strategies (e.g., direct instruction) could have been more frequently reported than behavioral strategies (e.g., applied behavior analysis) because approximately 50% of children with special needs have learning disabilities, as compared to 8.1% who are identified with a serious emotional disturbance (U.S. Department of Education, 2005). The most effective practice was reliably reported as being more frequently used and observed by both groups for the instructional and encoding and retrieval of information strategy dyads. However, modality instruction was still frequently reported by the special education teachers; it was just less frequently reported than direct instruction. Moreover, applied behavior and social skills training were reported with equal frequency for both groups despite mean effect sizes of .93 and .21, respectively (Kavale & Forness, 2000).

These data are probably more optimistic than those of previous observational studies that found generally poor instruction (Vaughn et al., 2002), but the survey respondents' perceptions of practice are not completely in line with the empirical evidence for effectiveness, a finding predicted by several scholars (Browder & Cooper-Duffy, 2003; Carnine, 1997; Cook et al., 2003; Espin & Deno, 2000). For example, perceptual-motor training was the least frequently reported practice, and it had a mean effect size of approximately zero, but it was still reportedly used on at least a weekly basis by approximately 30% of the special education teachers who responded. Given the almost complete lack of support for this approach, any perceived use within the schools is questionable and so represents a gap between research and practice. Modality instruction and social skills training also rated higher than what probably should be reported given the demonstrated ineffectiveness, but direct instruction appears to be a common practice with well-documented effectiveness. However, that a practice is reportedly used by teachers and observed by school psychologists does not mean that it was implemented correctly, which is a common concern in intervention and instructional research (Elliott, Witt, Kratochwill, & Stoiber, 2002; Sanetti & Kratochwill, 2005; White & Kratochwill, 2005; Ysseldyke, 2001; Ysseldyke & Bolt, 2007).

The data suggest only the reported prevalence of various approaches and do not inform why some practices are implemented and others are not. For example, although modality instruction and perceptual-motor training have similar mean effect sizes ($d = .14$ and .08, respectively), the former was reportedly used at least weekly by more than twice as many respondents as the latter. Perhaps modality instruction is based in the learning styles concept, which is commonly used and valued in teacher training programs (Honigsfeld & Schiering, 2004), or there are perceived differences between the two regarding effectiveness, required resources, or intrusiveness (Witt, 1986). Regardless, these are merely hypotheses in need of future research.

Although the results are generally consistent between the two groups, some differences occurred. However, it is difficult to directly compare the two groups of respondents because of the different survey formats. Moreover, it is unclear whether either group more accurately represented actual practice than the other did. Teachers are more likely to select untried interventions that are consistent with their theoretical orientations (Broddy, Schneider, & Udyari, 1995; de Mesquita & Zollman, 1995; Witt, 1986) and may therefore rate the prevalence of various interventions in

accordance with those orientations. Thus, differences in reported prevalence between the two groups could reflect differences in perspectives and/or orientations rather than observed prevalence. However, this is also a hypothesis that requires empirical investigation.

The response rates for these surveys were disappointing (34.8% for special education teachers and 33.3% for school psychologists), but they are consistent with previous survey research with these groups. For example, Gagnon and Maccini (2007) had a result rate of 36.0% for a survey of special education teachers despite two mailings, a reminder postcard, and a follow-up phone call. Other return rates reported in the literature for special education teachers included 12.5% (Wehmeyer, Agran, & Hughes, 2000), 24.0% (Zhang, Ivester, & Katsiyannis, 2005), 35.5% (Grigal, Neubert, Moon, & Graham, 2003), 46.8% (Repie, 2005), and 57.0% (Luckner & Carter, 2001). Response rates for surveys of schools psychologists included 36.5% (Carlson, Demaray, & Hunter-Oehmke, 2006), 37.1% (Chafouleas, Clonan, & Vanauken, 2002), 40.4% (Bainter & Tollefson, 2003), 47.0% (Fowler, & Harrision, 2001), and 74.0% (Curtis, Hunley, Walker, & Baker, 1999).

Data from the current study are also consistent with demographic data from previous surveys of these groups. For example, previous studies have found that 86% (Simeonsson, Carlson, Huntington, McMillen, & Brent, 2001) to 92% (Luckner & Carter, 2001) of special education teacher respondents were female; 42% taught in a suburban community, which was the largest group (Repie, 2005); 35% and 41% taught in a resource room and a self-contained classroom, respectively (Zhang et al., 2005); and 84% of teachers were Caucasian (Strizek, Pittsonberger, Riordan, Lyter, & Orlofsky, 2006). National estimates of special education teacher demographic variables are also consistent with the current data in that only 14% of special education teachers in this country are from historically underrepresented groups (Tyler, Yzquierdo, Lopez-Reyna, & Flippin, 2002). A national study of demographic data for school psychologists found comparable results, with 71% of the respondents being female, 95% being Caucasian, and 45% working an a suburban community (Curtis et al., 1999). Moreover, demographic data for the National Association of School Psychologists suggest that 70% of its members are female and 93% are Caucasian, with a plurality (35.6%) being from a suburban setting (Curtis, Grier, Abshier, Sutton, & Hunley, 2002).

Although these data are probably of interest to researchers as well as practitioners, some limitations should be noted. First and most obvious is the self-report nature of the scales, which presents the possibility of receiving socially desirable answers. Future researchers may wish to extend this line of research through observational techniques. Furthermore, the respondents were members of the Council for Exceptional Children and the National Association of School Psychologists, two well-respected national organizations that distribute research journals to their members. Thus, these could be well-informed respondents who because of the ready availability of research journals, are atypically research based in their practice or are more likely to select desirable responses. Moreover, the respondents may have had a preexisting understanding of one of the terms that did not match the definitions provided, which could have influence their responses. Future researchers may wish to select respondents from a database that is not associated with a professional association. These data are also limited by the availability of meta-analytic research and interpretation schemes. Despite the many meta-analyses relevant to the topic, we focused on those regarding instruction within special education, which limited the range of meta-analytic studies to those mentioned above. Moreover, we used Cohen's somewhat arbitrary effect size interpretation (1988) of 0.80 being large, 0.50 being moderate, and 0.20 being small because it is commonly used and no other accepted criteria exist. Future researchers may wish to expand the item pool by expanding the scope and number of meta-analyses from which items are developed and by focusing on more recently completed research; they may also wish to use a more sophisticated interpretation of the data. An additional limitation of the data involves the low response rate for each survey. Although these response rates are similar to others from previous research, how well the responses in the current study represent the general populations is unknown and could limit the internal validity of the conclusions. Finally, the reliability of responses is unknown, which suggests that respondents could present different pictures if asked across multiple instances.

Research-based practices are essential in the education of children in general and are seemingly even more important for children with disabilities. Although these data are not conclusive, they do suggest that many teachers reportedly engage in practices for which there is a strong research base, but there is definite room for improvement. Given that No Child Left Behind was passed in 2001, it might be interesting to replicate this study in 5 years to examine whether the reported prevalence of research-based practices

increases over time as the mandate becomes institutionalized. Regardless, research on teacher practices will continue to be of interest and thus clearly warrants additional empirical inquiry.

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