

Co-Teaching in Inclusive Classrooms: A Metasynthesis of Qualitative Research

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ABSTRACT: *Thirty-two qualitative investigations of co-teaching in inclusive classrooms were included in a metasynthesis employing qualitative research integration techniques. It was concluded that co-teachers generally supported co-teaching, although a number of important needs were identified, including planning time, student skill level, and training; many of these needs were linked to administrative support. The dominant co-teaching role was found to be "one teach, one assist," in classrooms characterized by traditional instruction, even though this method is not highly recommended in the literature. The special education teacher was often observed to play a subordinate role. Techniques often recommended for special education teachers, such as peer mediation, strategy instruction, mnemonics, and training of study skills, self-advocacy skills, and self-monitoring, were infrequently observed.*

In response to recent trends and legislation promoting inclusive instruction and access to the general education curriculum, many schools have implemented "co-teaching" (Cook & Friend, 1995) as a means for promoting effective instruction in inclusive classrooms. Implemented to provide support for increasing the inclusion of students with disabilities, co-teaching usually consists of one general education teacher paired with one special education teacher in an inclusive classroom of general education and special education students (e.g., Mastropieri & Scruggs, 2006, chapter 2).

Bauwens, Hourcade, and Friend (1989); Cook and Friend (1995); and Friend (2002) discussed criteria needed for an effective co-teaching relationship. A number of co-teaching variations have been identified (see also Friend & Cook, 2003; Walther-Thomas, Korinek, McLaughlin, & Williams, 2000). These include:

- One teach, one assist (or, "drift"), where one teacher (usually, the general education teacher) assumes teaching responsibilities, and the special education teacher provides individual support as needed (Walther-

Thomas et al., 2000, did not mention this variation).

- Station teaching, where various learning stations are created, and the co-teachers provide individual support at the different stations.
- Parallel teaching, where teachers teach the same or similar content in different classroom groupings.
- Alternative teaching, where one teacher may take a smaller group of students to a different location for a limited period of time for specialized instruction.
- Team teaching (or interactive teaching), where both co-teachers share teaching responsibilities equally and are equally involved in leading instructional activities.

PREVIOUS REVIEWS OF CO-TEACHING

Previous reviews of co-teaching have summarized accumulated literature and identified important variables. Friend and Reising (1993) provided an overview of the history of co-teaching. These authors concluded that research was limited and mostly anecdotal; however, available evidence suggested that teachers believed that co-teaching had a positive effect on student achievement.

Welch, Brownell, and Sheridan (1999) provided a broader review of team teaching and school-based problem-solving teams. This review included 40 articles on team teaching, of which many were technical reports, anecdotal reports, or position papers. They concluded that teachers report positive attitudes toward various forms of co-teaching; however, there was limited knowledge about student outcomes, and a lack of empirical evidence supporting co-teaching.

Weiss and Brigham (2000) reviewed 23 quantitative and qualitative studies of co-teaching, published between 1987 and 1999, including investigations of both elementary and secondary settings. They reported that considerable variability was apparent in co-taught classes. However, the special education teacher typically was responsible for modifying instruction, behavior management, and monitoring student progress; whereas the general education teacher

was responsible for the content of instruction. Some evidence was presented that the standard of individualized instruction may not be met for students with disabilities. Important components of successful co-teaching experiences identified from this research included the general education teacher's attitude, sufficient planning time, voluntary participation, mutual respect, administrative support, and a shared philosophy of instruction and behavior management. Weiss and Brigham also concluded that efficacy research was insufficient.

Murawski and Swanson (2001) conducted a meta-analysis of quantitative efficacy research on co-teaching. Their comprehensive search procedures yielded only six research reports (three journal articles and three ERIC documents), which yielded an overall effect size (standardized mean difference) of .40, from dependent measures including academic achievement, social outcomes, attitudes, absences, and referrals. They concluded that available research yielded moderate effects, but that the overall data set was too small to draw firm conclusions.

Dieker and Murawski (2003) discussed co-teaching at the secondary level. They emphasized the importance of teacher preparation, sufficient planning time, mastery of content by special education teachers, and pointed to large class sizes and high-stakes testing as particular challenges to co-teaching success. They recommended proactive communication, varied instructional practices (e.g., classwide peer tutoring), teacher training, use of a variety of co-teaching models, voluntary participation, common planning periods, and flexibility.

Weiss (2004) reviewed and updated the conclusions of Weiss and Brigham (2000), and the research conducted since that time. She concluded that most of the studies reviewed had occurred in settings considered to be successful, and that most of these studies concluded that the personalities or teaching styles of the teachers were particularly important. She also reported that the role of the special education teacher was not always clearly specified, and that outcomes of co-teaching were typically reported using vague or subjective language. Another important issue raised by Weiss was the limited amount of efficacy research.

A number of other articles made some reference to the research literature, but focused primarily on suggestions for teachers implementing co-teaching based on previous research and the authors' personal experiences. Murawski and Dieker (2004) provided suggestions and strategies for co-teaching at the secondary level. They emphasized the importance of administrative support, establishing co-teacher roles, effective planning, shared classroom management, and appropriate assessment. Keefe, Moore, and Duff (2004) recommended that secondary co-teachers develop awareness of themselves, their co-teacher, their students, as well as relevant content and strategies. They reported that research to date revealed that secondary teachers lacked training and skills and have more negative attitudes about co-teaching. Gately and Gately (2001) focused on important components of the co-teaching relationship, including communication, content knowledge, planning, classroom management, and assessment. Vaughn, Schumm, and Arguelles (1997) discussed common co-teaching issues, based on conversations with teachers. These issues included "ownership" of students, classroom management, space, communication, and planning time.

Previous reviews and other relevant literature have generally concluded that efficacy research is limited. However, a number of variables of potential significance have been identified, including co-teacher compatibility, administrative supports, planning time, teacher training, and flexibility.

QUALITATIVE RESEARCH

Based on these previous reviews, it can be concluded that available efficacy data are generally positive, but limited. In addition to important questions of efficacy, however, a number of other relevant questions can be asked about the practice of co-teaching. Based on considerations from previous literature, these questions include the following:

- How is co-teaching being implemented?
- What are perceptions of teachers?
- What problems are encountered?
- What are the benefits perceived to be?

- What factors are needed to ensure success of co-teaching?

Investigations addressing these questions are typically qualitative in nature. Qualitative research is generally appropriate for describing and providing insights about attitudes, perceptions, interactions, classroom structure, and behaviors, relevant to co-teaching. Qualitative research also has increased enormously in special education research over recent decades (Brantlinger, Jimenez, Klingner, Pugach, & Richardson, 2005; Pugach, 2001; Scruggs, Mastropieri, & McDuffie, 2006). To date, a considerable amount of qualitative research has been conducted in the area of co-teaching. However, at present the research base consists mostly of individual investigations with little previous attempt to summarize or synthesize findings. This investigation, therefore, was intended to systematically summarize and integrate the findings of all available qualitative research reports into one integrative review. As such, it was intended to shed light on the practice of co-teaching from the perspectives of relevant research. In order to do so, it was necessary to identify and implement appropriate techniques for synthesis of qualitative research.

RESEARCH SYNTHESIS

Research synthesis is an attempt to integrate systematically a large body of related research literature. The procedure was first applied to quantitative group-experimental research data, and referred to as meta-analysis (Glass, McGaw, & Smith, 1979). Since that time, literally thousands of meta-analytic investigations have been completed, and many of these have been applied to special education (Forness, 2001). In addition to meta-analyses of group-experimental research, quantitative research synthesis techniques have been applied to single-subject research (Scruggs, Mastropieri, & Casto, 1987; Swanson & Sachse-Lee, 2000) and survey research (Scruggs & Mastropieri, 1996). Qualitative research synthesis has been previously conducted, mostly in the health sciences (Campbell et al., 2003; Paterson, Thorne, Canam, & Jillings, 2001), and sometimes referred to as "meta-ethnography" (Noblit & Hare, 1988); "metasynthesis" (Sandelowski,

Docherty, & Emden, 1997); or "metastudy" (Patterson et al.). Although some focused synthesis work has been conducted in the area of educational leadership and desegregation (Noblit & Hare, 1988), to date, no true integrative review of qualitative special education research using research synthesis techniques has been identified.

The appropriateness and merits of qualitative metasynthesis have been previously discussed in the literature (see Sandelowski et al., 1997; Scruggs et al., 2006). It has been argued that the nature of qualitative research seems antithetical to synthesis, or "summing up" (Light & Pillemer, 1984), and that the original research may be distorted or endangered by this process. It could be argued, in fact, that it is exactly this idiographic element that contrasts so sharply with quantitative studies, which offer general conclusions about the behavior or performance of groups, and are less relevant to individual cases. Another concern is that summarization of research including the diversity of methodologies employed under the umbrella of "qualitative" research—including case studies, phenomenological studies, ethnographies, semi-structured interviews, and narratives—could trivialize differences among them and could be problematic in practice (Sandelowski et al.).

These concerns, however, should also be weighed against the consequences of *not* summarizing qualitative research. One problem is that qualitative researchers often have been isolated from each other, working in a "cottage industry," to produce "one shot research" (Estabrooks, Field, & Morse, 1994, p. 510). This has limited opportunity for researchers to learn from each other, and has reduced findings into "little islands of knowledge" (Glaser & Strauss, 1971, p. 181). Without developing the connectedness latent within and across qualitative research studies, this important body of research may exert only a limited impact on policy and practice.

CONDUCTING QUALITATIVE METASYNTHESIS

Unlike quantitative synthesis (meta-analysis) of group experimental research reports, qualitative metasynthesis is not concerned with summarizing or reducing findings to a common, standardized

metric, such as a mean effect size. Rather, the purpose is to integrate themes and insights gained from individual qualitative research into a higher-order synthesis that promotes broad understandings of the entire body of research, while still respecting the integrity of the individual reports.

Several researchers have proposed and employed methods for systematically integrating qualitative research (see Scruggs et al., 2006, for a discussion). For instance, Noblit and Hare (1988) described several ways qualitative research synthesis could be accomplished, including (a) "reciprocal translation," involving recursive reading and analysis, and comparison of metaphors used in different studies; (b) "refutational" meta-ethnography, investigating why researchers come to different conclusions, such as Freeman's (1983) refutation of Margaret Mead's (1928) *Coming of Age in Samoa*; and (c) "line-of-argument" synthesis, where studies are translated into one another, the result being a more parsimonious but encompassing understanding of the phenomenon being studied. Noblit and Hare provided an example of such a synthesis using five studies on racial desegregation. Schofield (1990) conceived of qualitative metasynthesis as the creation of cross-case generalizations based on generalizations made from, and about, individual cases (see also Miles & Huberman, 1994; Ragin, 1987).

Qualitative research synthesis in the health sciences, generally using the models of Noblit and Hare (1988), have been reported by Beck (2001), Campbell et al. (2003), and Jensen and Allen (1994). In the field of education, Gersten and Baker (2000) conducted a "multi-vocal synthesis" of instructional techniques for English language learners. This synthesis incorporated many of the analytic principles discussed by Noblit and Hare and included intervention studies with experimental designs, descriptive studies of instructional practices, and an uncommon third source, input from professional work groups.

In the present investigation, we determined to treat each identified research report as an individual "informant," and create a metasynthesis across all individual research reports, using procedures familiar to qualitative researchers. In this way, each author(s) is/are allowed to present original data and conclusions based on these data. That information is then integrated with the find-

ings of other researchers, in much the same way a qualitative researcher might use data from multiple informants to draw conclusions.

Considering the complexity of synthesizing a large number of original research reports, each containing its own individual data sources, we employed NVivo software for entering text and other information, coding and categorizing qualitative data, and assisting with organization of qualitative data into general themes. Also known as QSR NUD*IST Vivo (Fraser, 1999), NVivo was developed by Qualitative Solutions and Research Priority of Australia for use in qualitative research procedures. NVivo was thought to be particularly helpful in this investigation, because it allows a large amount of textual data to be stored and coded, and because it allows the researcher to reflect critically on the analysis as it unfolds, while storing individual insights that may be progressively refined as more information is added (see also Paterson et al., 2001).

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METHOD

SELECTION CRITERIA

This investigation gains understanding about the practice and processes of co-teaching by synthesizing available qualitative research reports. Studies that were included for this synthesis employed qualitative research methods as a primary methodology, although studies were included if they also employed quantitative methods. Quantitative surveys of co-teachers in which some additional verbal responses were solicited (through open-ended or direct questions) were not included; however, substantive qualitative interviews conducted subsequent to a quantitative survey, and analyzed using qualitative methods, were included. Studies that specifically focused on one

or more students with disabilities in an inclusive class, without specific reference to co-teaching as a primary research question, were not included (e.g., Zigmond, 1995; Zigmond & Baker, 1994). Reports included in this investigation had been reported in journals, dissertations, and master's research reports. Dissertations and theses were included if they met quality standards employed in this synthesis, as discussed in a following section.

SEARCH PROCEDURES

Search procedures included the search of electronic databases, including PsychINFO, ERIC, Dissertation Abstracts, and Digital Dissertations. Descriptors employed in the searches included co-teaching, inclusion, mainstreaming, and cooperative teaching. We also employed wildcard versions as well as multiple versions of these terms, for example, include, inclusive, included, mainstream, co-teach, coteach. An ancestry search of each reference list was also employed, in order to identify relevant research that had been cited by authors of identified research. A descendant search of cited research, using the Social Sciences Citation Index identified reports that had cited relevant research. Finally, a hand search of relevant journals (any journals devoted to special education practice, for example, *Exceptional Children*, *Journal of Special Education*, *Learning Disabilities Research & Practice*, *Remedial and Special Education*) was conducted to identify articles that may have been overlooked from the previous procedures.

We did not set any deliberate time limits in the search. However, among the earliest references was a paper by Bauwens et al. (1989), which cited no previous research (ongoing field test data were mentioned). The first formal qualitative studies of co-teaching as it is presently known appeared around the mid-1990s, according to our search procedures. (A small number of reports did appear before this time, but these did not meet our quality criteria.)

DATA ANALYSIS

Once all relevant research reports were obtained, they were coded for a number of setting and demographic variables, including geographical region; grade level; urban/rural/suburban setting; predominant co-teaching model; number of

participants (including administrators, special education and general education teachers, students, and other participants); type of disabilities represented among the participants; socioeconomic status of the school; and subject(s) being taught. In addition, we coded selection criteria (e.g., representative, nonsystematic, known to investigator, considered outstanding), and whether or not co-teachers were volunteers. At least two coders agreed on all coding decisions.

Next, all research reports were converted to digital format and saved as separate documents. This was accomplished through retrieval from online versions of journals, and PDF files obtained through Digital Dissertations. When necessary, reports were retyped and saved in electronic format. Each report was saved as a separate document in NVivo.

All reports were read at least once before we implemented coding procedures; during this process we took notes and wrote comments, and highlighted significant text. We then implemented a process of open coding (see, e.g., Creswell, 2006) to identify and code all seemingly relevant and consequential considerations. This was an inclusive, recursive process, in which we continuously revisited previous coding decisions to determine whether coding was being implemented systematically and consistently. Some coding categories that appeared initially to be significant were found to be less well represented in the literature as a whole. For example, we had expected "appropriate curriculum" (i.e., accessible to all students, and appropriate for diverse learning needs) would be considered an important component of successful co-teaching, yet reference to this variable was made in only three reports. We were also surprised to note only a few oblique references to differentiated instruction, although the reasons for this became more clear over time. Likewise, we created coding categories for the influence of prior experience, influence of high-stakes testing, class size, and teacher turnover; only ultimately to determine that these issues were raised only rarely. Why these issues, and others, were only infrequently raised, however, was in itself an important issue to be considered in the context of other data. Grade level at first seemed to us to be a variable of significance; however, an

overlapping and perhaps more significant variable was seen to be content knowledge.

Overall, free coding of all studies resulted in 69 categories ("free nodes" in NVivo), representing many different facets of the co-teaching process. After this, a recursive process of category analysis, contextual analysis, and identified relationships among categories was implemented among at least two coders. After discussion, application, and revision, we created four superordinate categories, each with at least 12 of our original category codes included:

- Expressed benefits of co-teaching.
- Expressed needs for success in co-teaching.
- Special and general education teacher roles in co-teaching.
- How instruction is delivered in co-taught classes.

Although some overlap was noted, the original codes seemed to fit relatively easily within these categories. Subsequent analysis focused on axial coding, where relationships between and among codes (within and across superordinate categories) were identified (Strauss & Corbin, 1998). For example, one of the most commonly mentioned categories was planning and planning time for co-teaching; however, this category was very frequently mentioned (although not exclusively) in the context of administrative support. Although most investigations reported on professional benefits to co-teachers, this issue was mediated considerably by the issue of personal compatibility.

Data analysis procedures employed in this investigation were largely inductive. The process of analytic induction "involves scanning the data for categories of phenomena and for relationships among such categories, developing working typologies and hypotheses upon an examination of initial cases, then modifying and refining them on the basis of subsequent cases" (LeCompte & Preissle, 1993, p. 254). Obtained data from the original research reports were assimilated and evaluated in a recursive fashion, in order to develop hypotheses about the practices and perspectives associated with co-teaching. Similar to qualitative data analysis of original data, discrepant cases and negative cases were used to further understanding and refine hypothetical

constructs. Observations and themes from original research were subjected to the constant comparative method, in which incidents, categories, and constructs were subjected to overlapping and recursive comparisons (LeCompte & Preissle). For example, the paucity of data attesting to differentiated instruction, peer mediation, or strategy instruction in co-taught classrooms could at first appear puzzling, but was supported by other data attesting to the general education teacher's typically dominant role in the co-taught classroom, coupled with the general education teacher's typical affinity for whole class, homogeneous instruction. As discussed in later sections, such practices placed significant limitations on co-teaching practice.

In this investigation, we avoided an actuarial approach to data analysis. That is, rather than counting instances of reported or observed phenomena and providing specific totals, means, or percentages, we evaluated phenomena with respect to recurrence, corroboration, and presence or absence of disconfirming instances in same or other research reports (and how disconfirming instances, when observed, were explained). By these means, we hoped to arrive at conclusions based on procedures that were faithful to the data analyses employed in the original investigations.

STUDY QUALITY

One important consideration in research synthesis is the quality of the investigations being included. In making these determinations on the study level, we employed quality considerations referred to as "credibility or trustworthiness" by Brantlinger et al. (2005). We were careful to endorse the caution of Brantlinger et al. against "using credibility measures as a checklist in a rigid or unreflective way" (pp. 200–201); rather, we considered all these measures simultaneously along with each study, employing such considerations as triangulation, disconfirming evidence, prolonged field engagement, detailed description, member checks and peer debriefing. We also considered "quality indicators" as represented by Brantlinger et al. (Figure 3, p. 202) regarding systematic and appropriate collection and representation of data. We included all reports that met a minimum standard of quality, although some

variability was noted. It should further be considered that all studies included had also been found to be acceptable by some form of peer review, whether an editorial board, dissertation or thesis committee.

In addition, we considered the credibility of specific data within individual research reports. Two different forms of data were considered. One consisted of original data (e.g., observations, interview transcripts, or documentary evidence) collected from participants. The second form of data consisted of specific and general conclusions drawn by the researchers regarding co-teaching, based on the original data collected. For the primary data reported by the authors of the research reports, we considered carefully the quality indicators represented by Brantlinger et al. (2005). That is, for any participant comments reproduced in this synthesis, we ensured that, for example, the participant was appropriate, the question was reasonable, and the comments were transcribed appropriately. For any researcher conclusion reported in this synthesis, we determined that the conclusion reflected appropriate credibility measures (see Brantlinger et al.); that is, that data were systematically collected and recorded, multiple informants and/or data sources were obtained, disconfirming evidence was considered, and the conclusion was reasonable and appropriate based on the data collected.

RESULTS

OVERALL CHARACTERISTICS OF THE DATA SET

Using the search procedures and selection criteria standards previously described, 32 original reports of qualitative research on co-teaching were identified (see Table 1). These reports involved as participants 454 co-teachers, 42 administrators, 142 students, 26 parents, and 5 support personnel. These co-teachers were working in geographically diverse schools, representing states in the Northeast, Mid-Atlantic, Southeast, Midwest, Southwest, and West coast of the United States; in Canada; and in Australia.

As well as geographical representation, identified studies represented a range of grade levels:

TABLE 1

Study Characteristics

<i>Author/Year</i>	<i>Participants^a</i>	<i>Setting/Geographic Region^b</i>	<i>Data Sources^c</i>	<i>Predominant CT Model</i>
Antia, 1999	5 tchrs (3 GE, 2 SE); 3 SE st; 3 interp; 2 adm	elem; rural; southwest	int; obs, doc	1 teach, 1 assist
Austin, 2001	6 pairs of CT	elem, sec; nr; NJ	int	combination
Bessette, 1999	2 GE, 1 SE	elem; sub; MA	int; obs, doc, jnl	1 teach, 1 assist
Buckley, 2005	11 tchrs (6 GE, 5 SE)	sec; rural; urban, sub; nr	int; obs, doc	1 teach, 1 assist
Carlson, 1996	1 pair of CT; 1 adm; 12 st; 12 parents; 6 additional CT	elem; urban; Canada	obs, int, doc, jnl	team teaching
Curtin, 1998	1 pair of CT	sec; sub; PA	int, obs, doc	1 teach, 1 assist
Dieker, 2001	9 GE, 7 SE; 54 st	sec; urban; midwest	int, obs, doc	combination
Drietz, 2003	6 st (3 GE, 3 SE)	elem; rural; MN	int, obs	1 teach, 1 assist
Feldman, 1998	3 pairs of CT	sec; sub; CA	int, obs, doc	1 teach, 1 assist
Frisk, 2004	4 pairs of CT; 1 SE tchr	elem; sub; RI	int, bio, focus grp	combination
Hardy, 2001	1 pair of CT	sec; sub; northeast	int, obs, doc	1 teach, 1 assist
Hazlett, 2001	7 GE, 9 SE; 2 support	elem; sub; PA	int	1 teach, 1 assist
Luckner, 1999	6 tchrs (2 SE); 20 st; 10 parents; 2 adm	elem; nr; CO	int, obs	1 teach, 1 assist
Magiera et al., 2005	10 pairs of CT	sec; rural, urban, sub; 2 mid-Atlantic states	int, obs	1 teach, 1 assist
Mastropieri et al., 2005	7 pairs of CT; 1 adm	elem, sec; rural, sub; northeast, midwest	int, obs, doc	1 teach, 1 assist
Morocco & Aguilar, 2002	8 GE, 3 SE; 4 adm	sec; urban; southern	int, obs	combination
Norris, 1997	1 pair of CT; 1 adm	sec; nr; VA	int, obs, doc, jnl	1 teach, 1 assist

continues

TABLE 1 (Continued)

Author/Year	Participants ^a	Setting/Geographic Region ^b	Data Sources ^c	Predominant CT Model
Pugach & Wesson, 1995	3 tchrs (2 GE; 1 SE); 18 str (9 GE; 9 SE)	elem; urban; midwest	int	1 teach, 1 assist
Rice & Zigmund, 2000	17 tchrs (GE & SE)	sec; urban; Australia, PA	int, obs	1 teach, 1 assist
Rosa, 1996	3 pairs of CT	pre-k-1; urban; NY	int, obs, doc	1 teach, 1 assist
Salend et al., 1997	1 pair of CT	kindergarten; rural; NY	int, jnl	Team teaching
Tarrant, 1999	1 pair of CT; 26 st (8 GE, 18 SE)	elem; urban; midwest	int, obs, doc	station, team. teaching/ combination
Thompson, 2001	11 tchrs (7 GE, 2 SE, 2 G)	elem; nr; FL	int, obs, doc	combination
Trent, 1998	2 GE, 1 SE	sec; sub; southeast	int, obs, doc	1 teach, 1 assist
Vesay, 2004	3 pairs of CT	elem; sub; northeast	int, obs, doc	1 tch, 1 asst/ parallel
Walther-Thomas, 1997	119 tchrs; 24 adm	elem, sec; nr; VA	int, obs, doc	1 teach, 1 assist
Ward, 2003	22 GE tchrs	sec; sub; midwest	focus grp	1 teach, 1 assist
Weiss & Lloyd, 2002	6 SE tchrs	sec; rural; mid-Atlantic	int, obs, doc	1 tch 1 asst/ alternative
Westberg, 2001	9 pairs of CT; 3 adm	elem; urban, sub; NJ	int, obs.	1 teach, 1 assist
Wood, 1998	3 pairs of CT; 4 parents, 3 st	elem; nr; CA	int	1 teach, 1 assist
Yoder, 2000	4 pairs of CT; 4 adm	sec; urban; midwest	int, obs	1 teach, 1 assist
Zigmund & Matta, 2004	41 pairs of CT	sec; urban, sub, rural; PA, NY	obs	1 teach, 1 assist

^aGE = general education; SE = special education; G = gifted; CT = co-teachers; tchrs = teachers, st = students; adm = administrators; interp = interpreters

^belem = elementary grade (including preschool); sec = secondary grade; sub = suburban; nr = not reported

^cint = interviews; obs = observations; doc = documents; bio = biographies; focus grp = focus groups; jrn = journals

15 involved primary, preschool, or elementary school classrooms; 14 studied junior high, middle school, or high school classrooms; whereas 3 investigated both elementary and secondary classrooms. These schools and classrooms also represented a range of locations, including 8 urban, 9 suburban, 4 rural schools; and 5 representing a combination of locations (6 were not reported). Ten of the reports specifically targeted "outstanding" examples of co-teaching for investigation; others were described as more typical of the co-teaching experience. Results are presented with respect to the four superordinate coding categories previously discussed.

BENEFITS OF CO-TEACHING

Benefits to Teachers. Teachers generally reported that they had benefited professionally from co-teaching experiences. For example, Austin (2001), in his semistructured interviews of 12 New Jersey co-teachers in K-12, agreed with many other researchers in his finding that general education teachers

generally considered co-teaching to have contributed positively to their professional development: Special education co-teachers cited an increase in content knowledge, and general education co-teachers noted the benefits to their skill in classroom management and curriculum adaptation. (p. 250)

In her qualitative investigation of three co-teachers in an integrated Grade 2/3 classroom, Bessette (1999) interviewed the general education teacher, who reported

"Having Mary as the special education teacher show me what she knows, could only make me a better teacher. And, I feel that's going to be the same with Kelly, too—she has lots of new ideas, and I've done nothing but learn, and change, and grow." (p. 110)

Many other investigations specifically reported similar professional benefits to co-teachers (e.g., Buckley, 2005; Carlson, 1996; Curtin, 1998; Luckner, 1999; Rice & Zigmond, 2000; Salend et al., 1997; Tarrant, 1999; Thompson, 2001; Trent, 1998). For instance, one of the elementary grade general education co-teachers from the Frisk (2004) investigation reported, "I learned so

much this year from my partner. I learned how to adapt lessons for each student; she really taught me so much" (p. 98). This perceived value, however, appeared to be predicated on the two teachers being personally compatible. The need for compatibility, discussed in a following section, was mentioned very often, frequently within the same report, and several instances were provided where lack of compatibility undermined the effectiveness of the co-taught classroom (e.g., Frisk; Norris, 1997).

Benefits to Students Without Disabilities.

Teachers sometimes noted increased cooperation among their students in co-taught, inclusive classes. Salend et al. (1997) quoted a general education kindergarten teacher who reported,

"Norma fell off her chair today and Robert immediately asked, 'Are you OK?' in a concerned, caring way. Lee then got up to help her pick up her crayons—it was wonderful." (p. 8)

Teachers sometimes noted increased cooperation among their students in co-taught, inclusive classes.

Many other investigations supported these conclusions, and provided evidence for academic benefits, particularly through extra teacher attention (e.g., Luckner, 1999; Pugach & Wesson, 1995; Rice & Zigmond, 2000; Yoder 2000). For example, an elementary-level general education student in the Drietz (2003) investigation reported, "You can ask them [special education teachers] a question, and they are there to help you" (p. 30). Also in that investigation, however, a special education student reported, "Sometimes other people are asking for help when you need help more" (p. 30). Co-teachers in a number of investigations reported on the positive effects of co-teacher collaboration as a social model for students (e.g., Carlson, 1996; Frisk, 2004; Hardy, 2001; Hazlett, 2001; Trent, 1998). Across all investigations, social benefits to students without disabilities were discussed more frequently than academic benefits.

Benefits to Students With Disabilities. Reports of benefits to students with disabilities were com-

mon in these investigations. Teachers in the Walther-Thomas (1997) investigation of 25 elementary and middle schools reported that only a few students failed to succeed in co-taught classes: One special education teacher described a student who "was truly amazed to find that he could do OK in here . . . When he realized all of this, he was willing to work harder than he ever had in the self-contained classes" (p. 399). Teachers in several investigations noted the benefit of exposure to peer models for appropriate behavior (e.g., Carlson, 1996; Vesay, 2004; Ward, 2003; Yoder, 2000).

One commonly expressed benefit of co-teaching was said to be the additional attention received by students with disabilities. For example, Norris (1997) interviewed a general education middle school teacher, who responded

"The best thing about co-teaching is having another person in the classroom . . . knowing that there are targeted students in the classroom who need extra help and having either the co-teacher or myself address those while the other teacher is doing something else." (pp. 84-5)

Five of six interviewed sixth-grade special and general education students in the Drietz (2003) investigation mentioned the positive benefits of extra attention. One student reported, "I like that there are two people to help out, and you don't have to wait so long to get your question answered" (p. 28). The sixth student, however, felt that the extra classroom noise generated was distracting. A student with hearing impairments in a combined first/second-grade class reported, "It's a good class for me because I learn more stuff" (Luckner, 1999, p. 27). Pugach and Wesson (1995) interviewed 9 fifth-grade students in co-taught classes and concluded, "The students we interviewed felt as if their academic and social needs were being met better than had they been in classes instructed by a single teacher" (p. 291). Dieker (2001) interviewed 54 secondary level students with and without disabilities and reported that all students reported benefiting from the co-taught class, except for one student labeled emotionally disturbed who reported, "You can't get away with anything" (p. 19).

Student Skill Level. In spite of the substantial number of reports of student benefits, a number of participants stated strongly their concern that students included in co-taught classes have a minimum academic and behavioral skill level. This was a very common qualification, appearing in more than 20 of the 32 studies reviewed; disconfirmations, in the form of unqualified acceptance of all students in co-taught classes, were not noted. For example, Thompson (2001) studied 11 elementary-level co-teachers and reported, "The participants repeatedly cautioned about administrators forcing teachers to co-teach and felt equally adamant about including students with disabilities whose needs could not be met in the general education setting" (p. 129). Six secondary-level special education co-teachers in the Weiss and Lloyd (2002) investigation thought that some students with special needs "did not belong in co-taught classes but were there because school policy required them to participate in mainstream classes" (p. 65). Some of the teachers in the Walther-Thomas (1997) investigation "reported . . . 'horror stories' about poorly planned classrooms . . . some classrooms ended up heavily weighted with students who had learning and/or behavior problems. Unfortunately, these ill-fated classrooms set teachers and students up for failure and frustration" (p. 403). Bessette (1999) described the case of a student in a combined second/third-grade class who disturbed the harmony of the class. Similarly, a second-grade teacher in the Hazlett (2001) investigation reported

"Nathan had many teachers. He was here (in the classroom) all day long . . . but he was so frustrated and angry. He had tantrums because he wanted to do what the other kids were doing. He assaulted another child in the classroom and after that he assaulted the TSS staff, who was just a behavior person just for him. . . . He had two people for just one child!" (p. 107)

This teacher "emphatically denied that all children benefit from being in an inclusive classroom" (p. 107). Difficult students who threatened co-teaching efforts were reported by many other researchers, (e.g., Carlson, 1996; Feldman, 1998; Frisk, 2004; Pugach & Wesson, 1995; Ward, 2003). However, approaches for dealing with

these students varied. That is, in the Carlson investigation, one elementary co-teaching pair was able to cope with problem students, but other pairs were not. Feldman observed a secondary student who exhibited more than 75% off-task behavior. The special education teacher "alternates between monitoring this student closely and ignoring him altogether. [The general education teacher] is essentially uninvolved with this student, appearing to view him primarily as [the special education teacher's] concern" (p. 80). Considering such cases, the general report of the benefits to students with disabilities in co-taught classes must be tempered with teachers' concern that students meet minimum skill expectations.

EXPRESSED NEEDS OF CO-TEACHERS

Administrative Support. In addition to reported benefits, teachers also expressed a number of needs that in their view must be met for co-teaching to be successful. Primary among these needs was administrative support. For example, one teacher in Thompson's (2001) investigation of 11 elementary-level co-teachers spoke for the group in reporting, "Administrative support—that would be number one. Number two—picking the right teacher" (p. 129). Salend et al. (1997) studied co-teachers in a kindergarten classroom and reported, "the support of the principal also was instrumental in the success of the teachers' collaboration" (p. 8). Similarly, Chris and Kelly, fifth/sixth-grade co-teachers studied in the Carlson (1996) investigation, "made it clear that the support of the principal was crucial" (p. 64). In Frisk's (2004) study of five elementary-level co-teaching dyads, who were in strong agreement on this issue, one third-grade teacher reported, "the dyad must be committed but . . . local and district school administration must also be committed to supporting our inclusion model" (p. 96). Other researchers supported this finding (e.g., Curtin, 1998; Morocco & Aguilar, 2002; Norris, 1997; Thompson; Vesay, 2004; Yoder, 2000). No disconfirming evidence—that administrative support was not necessary—was identified. Administrative support was seen to be linked to a number of additional issues, discussed in the following sections.

Volunteerism. Many teachers maintained that it was necessary that co-teachers volunteer to teach together. Thompson (2001) reported that all of the participating elementary teachers "strongly advocated for voluntary participation" (p. 129). Carlson (1996) reported that the elementary-level behavior resource teacher, Amanda, "stated that it was critical 'that the impetus for the team comes from the two individuals involved, that it's not imposed by administration'" (p. 154). The principal agreed that "'co-teaching cannot be forced. Rather, it is a way of doing things that the two teachers must choose, though it can be suggested. In other words, teachers have to pick their co-teaching partners'" (p. 45). In Trent's (1998) study of four high school co-teachers, he reported,

Christine [the general education social studies teacher] believed that the transfer of Katherine [the special education teacher] was a prime example of how teachers' opinions were disregarded when planning co-teaching arrangements. Neither teacher had had a say in this change and, unfortunately, Katherine's co-teaching experience with the U.S. Government teacher was not successful. (p. 510)

Describing an unsuccessful preschool co-teaching pair, Rosa (1996) commented, "the arrangement seemed doomed for a number of reasons. First, and possibly most important, the principal had come to Elaine and practically forced her to take Frances because nobody else wanted her" (pp. 137–138). Vesay (2004) studied three pairs of early childhood education co-teachers, and concluded, "the effect on their collaboration is: *positive* when both teachers make a voluntary commitment to initiating the partnership" (p. 152).

Teachers' accounts of the necessity of voluntary co-teaching were frequently reported (see also Buckley, 2005; Curtin, 1998; Frisk, 2004; Hazlett, 2001; Norris, 1997). However, Ward (2003) found a different opinion expressed in focus groups of middle school teachers. One teacher reported,

"There are people in my building—this really bothers me—that have the 'Free from Special Ed' pass. I didn't know they [admin-

istrators] give those out, but some people in my building have one and don't have any special ed students because they exhibit qualities in the classroom that are not becoming to collaboration, so the special educator does NOT want to place students in those rooms." (p. 110)

Another teacher in this same investigation remarked,

"You have to say it is mandatory because I don't think you ever want a policy that certain teams or teachers can't have certain kids. Everyone should be doing something in their own small way showing that they are moving along that continuum." (p. 111)

However, the teachers in this investigation who felt that co-teaching should be mandated also felt it should be phased in over a period of years and accompanied by sufficient training and support.

Planning Time. A frequently noted issue was the importance of planning time, noted in nearly all of the investigations. Yoder (2000) reported that "Ann [a junior high special education teacher] noted in her journal, as well as repeatedly during the interview process that joint preparation times are necessary, particularly during the first year of a co-taught class" (p. 104). In a study of a secondary co-taught biology classroom, Curtin (1998) reported, "the special education teacher felt the barrier to co-teaching was a lack of planning time for collaboration with the regular education teacher" (p. 101). Dieker (2001) studied secondary-level co-teaching teams and concluded, "the teams talked regularly about the struggle to find adequate time to plan" (p. 20). These teachers reported having an average of 45.5 min per week (often interrupted by other factors), but felt they needed nearly three times that amount. In the Hazlett (2001) investigation, all co-teaching partners received 40-min scheduled planning time per week. However, even this level of planning time seemed insufficient, for teachers also felt the need to meet on an ongoing basis, at lunchtime, in the morning, at recess, or at the end of the day. Vesay (2004) reported in her study of three preschool co-teaching teams, "In response to a question of what makes their collaborative team successful Connie stated, 'For us it's sacred

planning time which we haven't had for two year[s]'" (p. 112).

Teachers frequently framed planning time in the context of administrative support; for example, Austin (2001) interviewed co-teachers who reported that they were satisfied with their present co-teaching assignment "but not with the level of support received from the school, noting that they needed more planning time" (p. 251). Several other researchers discussed the importance of administrative responsibility in facilitating planning, including Buckley (2005), Curtin (1998), Norris (1997), Ward (2003), and Yoder (2000).

Training. A very common theme across many investigations was the need for teacher training for co-teaching. In Vesay's (2004) study, one preschool co-teacher, Connie, felt unprepared for collaborative teaching. She admitted, "Oh, absolutely! I was frightened, I had no background. A trach[eostomy] scared me. A feeding tube frightened me, I was afraid I'd hurt somebody. I was!" (p. 112).

In other instances, teachers expressed a need for training to promote learning of more flexible thinking (Buckley, 2005); strategies, and practical skill development (Curtin, 1998); different co-teaching models (Feldman, 1998); use of technology (Luckner, 1999); characteristics of disabilities (Norris, 1997); collaborative consultation skills (Rice & Zigmond, 2000); group interpersonal skills (Rosa, 1996); and communicating more effectively (Walther-Thomas, 1997). Most of these investigations provided several examples of training needs.

There were few disconfirmations of these examples; however, although other teachers disagreed, one teacher from one of the five co-teaching pairs in the Frisk (2004) investigation reported,

"I think if someone is really interested in collaboration the only way to really figure out how to work with someone and how to interact is to do it. I never attended a workshop in how to do inclusion or how to collaborate." (p. 100)

A teacher in the Hazlett (2001) investigation found that a district inservice "wasn't very informative since it didn't tell us how" (p. 83). In spite

of such instances, however, most teachers, when asked, emphasized the importance of training.

Compatibility. Teachers were generally very emphatic about the need for co-teachers to be compatible. Rice and Zigmond (2000) studied 17 secondary co-teachers in Pennsylvania and Australia and concluded, "Several of the teachers . . . rated personal compatibility between partners as the most critical variable for co-teaching success" (p. 194). Similarly, an elementary-level general education teacher interviewed by Thompson (2001) commented when asked about co-teaching,

"I'd say, 'You should do it [co-teaching]. It's awesome,' you know. But make sure that it's with somebody that you get along with and that you have the same, you know, ideas about teaching and are equally motivated." (p. 128)

Similar cautions were observed in a number of reports, including those by Buckley (2005), Luckner (1999), Norris (1997), Rice and Zigmond (2000), Thompson (2001), and Westberg (2001).

A negative opinion, reported by the general education middle school teacher in the Norris (1997) investigation, underlined the importance of compatibility:

"If I had known that I would have to defend the way I have always believed in teaching, I would not have agreed to co-teach. . . . I have not been teaching for 30 years for someone else to tell me how to teach. . . . I am furious." (p. 107)

Frisk (2004) interviewed a general education first-grade teacher in an unsuccessful relationship who attributed the dissolution of the partnership to the special education teacher's

"inflexibility and personal issues." She thinks the downfall in their collaboration occurred because "Julie spent a lot of time on the computer doing personal things. When you have a lot of kids in the room with different needs you can't be doing it all by yourself." (p. 86)

Similar issues, frequently mentioned, included mutual trust and respect (e.g., Curtin, 1998; Feldman, 1998; Frisk, 2004; Norris, 1997), and

appropriate attitudes (e.g., Buckley, 2005; Carlson, 1996; Dieker, 2001; Rice & Zigmond, 2000; Ward, 2003; Yoder, 2000).

Marriage. Many investigations included some reference to co-teaching as a marriage, that is, requiring effort, flexibility, and compromise for success. For example, Luckner (1999) reported, "In many ways, a co-teaching partnership can be considered a professional marriage. . . . it entails dealing with a series of complex issues and emotions" (p. 30). One of the Grade 5/6 co-teachers studied by Carlson (1996) reported

[Maureen] compared the co-teaching process to marriage, saying, "If you're not willing to bend then I don't think it would work." Kate [agreed], "It's like a marriage because you compromise and you're getting different outlooks. You don't want to be a clone of one another." (p. 137)

Rice and Zigmond (2000) reported, "The teachers . . . described co-teaching as an unusually close partnership or, what one termed, 'a professional marriage,' which, 'like [a normal] marriage, you have to work at'" (p. 194). In discussing the failures of a co-teaching relationship, Mastropieri et al. (2005) concluded, "It was difficult to determine precisely what caused the erosion of the collaborative relationship, but as the vice-principal reported, 'Forced marriages often fail'" (p. 265). Other references to co-teaching as a marriage were reported by Bessette (1999), Buckley (2005), Curtin (1998), Frisk (2004), Morocco and Aguilar (2002), Norris (1997), and Rosa (1996). The consistency of this metaphor provides evidence for conformity of thought across studies (cf. Noblit & Hare, 1988).

TEACHER ROLES

Models of Co-Teaching. By a considerable margin, the most prominent model of co-teaching reported in these investigations was some version of "one teach, one assist." For example, Westberg (2001) studied nine elementary co-teaching pairs and reported,

by far, the most prevalent teaching configuration observed was one teaching, one assisting. The general education teacher was most frequently the lead teacher, while the special education teacher usually moved about the

classroom and interacted as necessary with individual students, although not necessarily classified students. (p. 70)

In some cases, the lead teaching duties alternated between special and general education teacher (e.g., the high school co-teaching pair in the Curtin, 1998, investigation, or the fourth-grade co-teachers in the Mastropieri et al., 2005, investigation), but these cases were a decided minority. For instance, although Morocco and Aguilar (2002) observed team teaching in an eighth-grade math class, Magiera, Smith, Zigmond, and Gebauer (2005) observed co-taught math classes in eight high schools and concluded,

The most common role . . . was monitoring of independent practice. . . . The other role most common to the special education teacher was assisting students as the mathematics teacher maintained the role of primary instructor. Cook and Friend (1996) described this as an appropriate role in the beginning stages of co-teaching. . . . Teachers participating in our study, however, had co-taught for 3 to 5 years but had not gone beyond this initial stage of co-teaching. (pp. 20–21)

Antia (1999) observed five co-teachers in elementary classes containing students with hearing impairments, and concluded

Although [the special educators] were responsible for some direct teaching, they were also responsible for assisting classroom teachers to make curricular adaptations and for planning cooperatively with them. Thus, their major role appeared to be providing services to classroom teachers rather than to the children. (p. 213)

In an observational study of 14 high schools, Zigmond and Matta (2004) concluded, "Our data set indicates that the SET [special education teacher] seldom took (or was permitted to take) the lead in instruction" (p. 63). Rice and Zigmond (2000) concurred from their study of 17 secondary teachers:

In all of our interviews and classroom observations we did not find a model of co-teaching that fully met the criteria we set: a shared teaching space with a diverse student group, shared responsibility for planning and for in-

struction, and substantive teaching by both co-teaching partners. (p. 196)

One teach, one assist was the most common model of co-teaching among the 16 co-teachers in four elementary schools studied by Hazlett (2001). Hazlett described the comments of a special education co-teacher in a developmental kindergarten:

"Bertha and I use one teaching, one assisting. I go around the whole room for correctness. I think it's easier for her to be on the floor all the time (because) she likes to be in control. Sometimes when I teach, she will interject. I never interject when she's teaching because I'm not comfortable with her. (Besides) she hits all the basics when she teaches." (p. 101)

Other models of co-teaching were noted in these investigations, although to a much lesser extent. Vesay (2004) noted the use of parallel teaching in a preschool setting, although Hazlett (2001) interviewed one teacher who reported, "We tried the parallel (teaching), and it just did not work out because two of the teachers have real strong voices and each group was being very distracted" (p. 104). Another teacher reported, "The kids with the most support have troubles in math and language . . . so in those situations, the way we have it set up is parallel teaching even though we may not be in the same room" (p. 91). Other models reported by teachers or observed by researchers include team teaching (Curtin, 1998; Feldman, 1998; Mastropieri et al., 2005; Weiss & Lloyd, 2002); alternate teaching (Curtin); and station teaching (Tarrant, 1999).

It is interesting to note that some co-teaching models involved special education teachers and general education teachers teaching in different classroom settings. For instance, Curtin (1998) reported the following observation of high school co-teachers:

These teachers were employing the co-teaching strategy called alternate teaching in which instruction is provided to students using different approaches to a smaller group of students. I was surprised that these two teachers decided to separate the class. (p. 72)

Mastropieri et al. (2005) described a situation in which two co-teachers were in conflict: "In effect, the teachers determined that one way to reconcile

serious problems in a co-teaching situation was to divide the class in two" (p. 265). Weiss and Lloyd (2002) reported observing co-teachers teaching in separate classrooms:

For example, concerning his middle school social studies class, Jim said, "There were too many disruptive behaviors going on, and none of the students [was] benefiting from it. And the easiest fix I could come up with was to split them, and we did. So he has 12 students and I have 12 students." (pp. 64-65)

Subordinate Roles and Content Knowledge. In many instances the special education teacher assumed, or was seen to assume, a subordinate role (e.g., Antia, 1999; Buckley, 2005; Hazlett, 2001; Magiera et al., 2005; Mastropieri et al., 2005; Norris, 1997; Pugach & Wesson, 1995; Rice & Zigmond, 2000; Zigmond & Matta, 2004). For instance, Norris wrote of a middle school special education teacher, "identifying with the role in the regular classroom as one of an assistant with less than equal status and an inability to successfully meet the needs of students, became frustrated in the co-teaching process" (p. 72). In discussing three teams of high school world history co-teachers, Mastropieri et al. concluded, "It was rare to observe special educators delivering instruction to the entire class" (p. 265). Notes from observations of one of these teams revealed

"This team of teachers interacted as a boss and an assistant when working with the students. The general education teacher assumed control of all aspects of the classroom at all times. . . . Throughout this time period, the special educator sat in the room and occasionally went around to individual students to see if they needed any assistance." (observation notes; p. 266)

A special education teacher in the Antia investigation reported, "I'm an aide sometimes, I'm an interpreter sometimes, and sometimes I'm a teacher" (p. 211). A preschool special education teacher reported to Rosa (1996) "She [the general education teacher] certainly allowed me to develop all the behavior management programs that were going on and things like that. I don't think she felt that I was taking over there, either"

(p. 84), using language indicative of a subordinate role.

In many cases, the subordinate role of the special education teacher appeared to reflect the relatively greater content knowledge of the general education teacher (e.g., Feldman, 1998; Mastropieri et al., 2005; Morocco & Aguilar, 2002; Pugach & Wesson, 1995; Rice & Zigmond, 2000; Rosa, 1996). For instance, Weiss and Lloyd (2002) reported,

teachers said that the content area of the class forced them to take certain roles. For example, Greta said, "I don't feel confident in some classes to be a team" . . . and Esther said, "Do you think I would have the audacity to go in the geometry class and say I was a collaborative teacher?" (p. 65)

In reporting on a high school English teacher and a special education co-teacher, Rice and Zigmond (2000) commented,

The two teachers described their practice as "an enmeshing of our abilities" . . . but they were clearly not equal partners in the instruction. In most cases, this disparity in roles was explained as necessary because the special education teacher lacked content knowledge. (p. 195)

However, expertise in content knowledge on the part of the special education teacher could be associated with a higher degree of shared responsibility (e.g., Pugach & Wesson, 1995; Rice & Zigmond, 2000). Yoder (2000) observed a high school American literature class in which both co-teachers shared most teaching responsibilities equitably. The general education teacher reported, "I think Carmine [the special education teacher] and I mesh well because we complement each other, and she also has the English background. I think that's a very strong contributing part of it" (p. 187).

Special education teachers in more subordinate roles were not confined to secondary grade levels. Instances of special education teachers assuming subordinate roles in elementary-level classrooms were reported by, for example, Antia (1999), Hazlett (2001), Rosa (1996), and Salend et al. (1997), suggesting that secondary content knowledge is not the only determinant of teacher roles. However, the lower status of special educa-

tion co-teachers, common at all grade levels, seemed more consistent in secondary levels, particularly in those classes with more specialized content knowledge.

Subordinate Role and "Turf." Teachers also identified turf issues that may have contributed to the relatively subordinate role of the special education teacher. As stated by a successful middle school special education co-teacher in the Morocco and Aguilar (2002) investigation, "We're entering their environment and we have to be the ones to go one step above and beyond" (p. 332). A high school special education teacher reported,

"Anytime you walk into another teacher's classroom there's going to be some type of negotiation that needs to occur for both of you in terms of just territory and what's asked of you. And that's a tough thing to negotiate." (Yoder, 2000, p. 150)

An administrator in the Norris (1997) investigation stated, "We as an industry are very territorial. It is really difficult for teachers to work together, change, and accept new ideas" (p. 145). Wood (1998) reported in her study of six elementary co-teachers

When special education teachers attempted to transplant their special education techniques or materials that were considered atypical in the general education environment . . . the general education teachers admitted that they would sometimes react territorially, snubbing their suggestions. (pp. 190-191)

One fifth-grade teacher in that investigation stated,

"[The special education teacher] tried to tell me how she wanted the discipline to run. And she brought in a chart and said, 'Now when [Jeanie] does this, you put a star here. When [Tim] does this, you put a circle here.' And I said, 'Well, OK.' But, I never did it because that's not the way the discipline in the class runs." (p. 191)

Buckley (2005) provided a middle school special education teacher's description of the difficulties of fitting into the general education teacher's classroom:

"I mean, if you're talking, I try to let you finish whatever you're doing. And then I'll contribute. I try not to bump in. Well, she told me I was barging in on her. So it was like, 'You will please not talk in my classroom.' And I was like, well, maybe I've got to be able to say something. It got to the point that I was raising my hand to talk. I thought, if this isn't stupid. But yeah. She really had trouble with somebody else in there." (p. 174)

Buckley concluded, "The regular education teachers saw themselves as the leader of their classrooms" (p. 179). Although most teachers valued the special education teacher, "all of them also said that they wanted things done their way and wanted to maintain control" (p. 179). Describing how she established her co-teaching relationship with a special education teacher, one general education teacher said,

"Okay, well first I would be in charge. [Laughs] And I would let her first observe me. And then I would invite her to perhaps try a couple of lessons and see how she does. And then perhaps now we're establishing a better rapport with each other and now I am beginning to trust her, to trust her to teach in the way I am expecting the children to be taught, allow her to gradually take over some lessons." (p. 179)

Although ownership or turf issues were common, they were not found in every classroom. For example, Frisk (2004) reported on the comments of a general education co-teacher of a third/fourth-grade class concerning co-teaching:

Faith thinks that it's successful because there's no competition of egos in the room. "We have no problem if Erica takes one of my lessons and modifies it or whatever . . . I don't feel that I must have total control of the room, and I don't think she does, either . . . we complement one another." (p. 66)

Note even in this example, however, Faith's use of the possessive in referring to "one of *my* lessons" (emphasis added).

*INSTRUCTIONAL DELIVERY IN
CO-TAUGHT CLASSES*

General Education Teacher. There was very considerable agreement that general education co-teachers favored strategies that could be applied to the class as a whole. Antia (1999) studied primary-grade co-teachers and reported, "teachers were most ready to make adaptations that they perceived as benefiting the entire class, for example, visual strategies" (p. 213). Buckley (2005) concluded from her study of middle school social studies co-teachers, "Regular education teachers tend to plan globally rather than focusing on individuals. Therefore, a strategy suggested by a special education teacher may possibly be provided for the whole class" (p. 176). Hardy (2001) studied a high school biology co-teaching pair and reported that some adaptations employed by the general education teacher included advance organizers, individual teaching, pacing, and classroom supports such as weekly schedules and seating assignments. However, Hardy observed:

a discrepancy was noted in the teachers' awareness of the necessity for specialized instruction. . . . The teachers used whole-class activities 100% of the time . . . students with disabilities in the co-taught classrooms followed the same sequence of activities and used the same materials as peers. (p. 185)

Similarly, Feldman (1998) reported of his secondary co-teachers, "Co-teachers are not likely to prepare individual lesson plans to accommodate students with LD . . . most of the accommodations appear to be designed at the whole class level" (p. 89). Mastropieri et al. (2005) observed "little differentiation of instruction to address individual needs" (p. 266) in co-taught high school world history classrooms. Magiera et al. (2005) reported that teachers typically employed a whole-class lecture and independent seat work approach in 10 co-taught high school mathematics classes.

On some occasions, the general education teacher's reliance on traditional methods was a source of frustration to the special education teacher. The middle school special education teacher in the Norris (1997) investigation reported, "I'm not happy with instructional methods that don't address the needs of students. Why

teach from a textbook that some students can't read?" (p. 69). On the other hand, general education teachers frequently did not see a distinction in the way they should address individual students. A general education fifth-grade teacher in the Pugach and Wesson (1995) investigation remarked, "Personally, I haven't seen any magic miracle on how to reach these [students]. It's the same thing in regular ed. And there is nothing different that we don't do if we had the time" (p. 291). In some instances, general education teachers reported that they needed to help students with disabilities prepare for "the real world" (Buckley, 2005, p. 182), and this to some extent may explain their observed reluctance to individualize.

Special Education Teacher. One special education teacher in an eighth-grade math class "assumed a full range of instructional roles—made the transition, introduced and explained the activity, provided instruction, and gave students feedback on answers provided by the groups" (Morocco & Aguilar, 2002, p. 336). However, such cases were rare. More typically, special education teachers generally provided the role of supporting the traditional role of the general education teacher. Curricular adaptations of a high school special education co-teacher (Trent, 1998, p. 506) included "developing outline sheets or modified study guides for the textbook chapters (e.g., fill-in-the-blank worksheets indicating page numbers where answers could be found)." Although these activities were generally seen to be helpful, they seemed quite different from the instructional practices usually attributed to special education teachers (e.g., Mastropieri & Scruggs, 2006). Feldman (1998) reported, "The primary strategy to accommodate LD students in this [secondary] classroom takes the form of [the special education teacher] providing temporary assistance via answering a question, redirecting off task behavior, or prompting attention" (p. 97). Curtin (1998) observed a secondary science class and reported, "The special education teacher stood at the mailbox and made sure each student placed their folder in the proper slot" (p. 79). Hardy (2001) observed a special education teacher in a high school biology class and reported, "occasionally, during the lecture Janet would interject a comment to the class. At one time she said,

'Remember when we talked about what enzymes did?'" (p. 166). In a first-grade class, the general education teacher led the class in a song, while the special education teacher "moved about the room organizing the chairs and picking up materials that were out of place from the previous activity" (Rosa, 1996, p. 84).

The tasks of the special education teacher seemed to reflect limitations imposed on the whole-class instruction that was commonly employed in general education classrooms. Magiera et al. (2005) concluded, "Because whole-class instruction continued to be the norm, special education teachers had few opportunities to offer individual instruction" (p. 22). Some special education teachers served as models. "The first year I was a model for the students. Often, if [the subject teacher] is lecturing, I would do the notes on the overhead [projector] to model note-taking" (Rice & Zigmond, 2000, p. 195). Zigmond and Matta (2004) observed 41 secondary co-teaching pairs and concluded,

The second teacher was a nice addition, an occasional relief for the GET [general education teacher], and more attention to students when class is organized for small group (team) or independent seatwork. But none of what we saw would make it more likely that the students with disabilities in the class would master the material. We did not hear the SETs [special education teachers] chime in with carefully worded elaborative explanations. . . . We virtually never saw the SET provide explicit strategic instruction to facilitate learning or memory of the content material. (p. 73)

Special Education Teacher and Behavior Management. Frequently, it was assumed that the special education teacher would assume responsibility for any problem behaviors that occurred in the classroom. Bessette (1999) reported on a journal entry of a general education second/third-grade classroom teacher:

"Michael presents many challenges—the fear of the other students is real, and I will pledge to keep them safe. Mary will restrain and remove him while I continue with the rest of the class. It has taken its toll on all of us." (p. 141)

Rosa (1996) reported that a first-grade special education co-teacher "handled the problems that came up which might disrupt the activity" (p. 84). Feldman (1998) observed of a secondary co-teaching pair: "[The general education teacher] actually presents the lesson information while [the special education teacher] stands off to one side and focuses most of her attention on monitoring the behavior of three of the seven LD students" (p. 80). The special education teacher as behavior manager was described in a number of other investigations (e.g., Buckley, 2005; Rice & Zigmond, 2000; Trent, 1998; Yoder, 2000).

Peer Mediation. In some individual cases, peer mediation in the form of cooperative learning or peer tutoring was employed very productively in co-taught classrooms (e.g., Carlson, 1996; Mastropieri et al., 2005; Pugach & Wesson, 1995). For example, Tarrant (1999) reported on the use of partner reading and partner spelling activities in a mixed-grade elementary classroom. Overall, however, peer mediation was observed far less than might be expected in these investigations. Feldman (1998, p. 96) observed that

GE/SE 1 are the only co-teaching pair in the present study to consistently utilize peer mediated instructional strategies This is curious in light of the relative popularity of cooperative learning (Slavin, 1990) and empirical support for various forms of peer mediated instruction (Utley, Mortweet, & Greenwood, 1997).

Referring to peer tutoring, a high school biology teacher reported to Hardy (2001), "I am going to tell you however that right now there is not that much of that going on." Janet [the special education teacher] adamantly disagreed and expressed, 'Yes, there is.' According to field notes, peer tutoring was never observed" (p. 181).

Norris (1997) observed a middle school co-taught class and concluded, "Students rarely interacted with each other once instruction began without permission and were reprimanded for doing so" (p. 132).

Other techniques that might have been expected were only rarely observed, such as principles of effective instruction (Mastropieri et al., 2005; Tarrant, 1999; Westberg, 2001); differentiated instruction (Tarrant; Yoder, 2000); appropri-

ate curriculum (Dieker, 2001; Mastropieri et al.); mnemonic instruction (Mastropieri et al.; Walther-Thomas, 1997; Yoder); effective student grouping (Pugach & Wesson, 1995; Tarrant); or strategy instruction (Mastropieri et al.; Tarrant; Walther-Thomas). Beyond these exceptions, peer mediation and other potentially helpful inclusion techniques appeared to be greatly underemployed.

DISCUSSION

We employed metasynthesis methodology in this review in order to enable us to examine issues and findings within and across studies with more precision and to summarize the research on the level of individual data rather than on the level of the research report. Although many of the present results may have been obtained from a more traditional study-by-study review, we believe our methodology allowed us to look across demographic variables (e.g., location, grade level) within and across studies, to aggregate data at the level of the individual case rather than individual study, and to focus on within- as well as across-study variation. Use of NVivo software allowed us to compare a large number of issues within and across studies and to examine more carefully disconfirmations (or their lack) and interactions with other issues. We believe that some of our findings—for example, grade level and content knowledge, planning time and administrative support, or benefits tempered by concerns about student skill levels—were more easily uncovered through this methodology.

Several general conclusions can be drawn from the results of this investigation. First, administrators, teachers, and students perceive the model of co-teaching to be generally beneficial, to general education and to (at least some) special education students in both social and academic domains, and to the professional development of teachers. Second, teachers have identified a number of conditions needed for co-teaching to succeed, including sufficient planning time, compatibility of co-teachers, training, and appropriate student skill level. Many of these concerns were linked to the more general issue of administrative support. Third, the predominant co-teaching model reported in these investigations is “one

teach, one assist,” with the special education teacher often playing a subordinate role determined, in part, by content knowledge, teacher “turf,” and the greater numbers of general education students in the co-taught classroom. Fourth, general education teachers typically employ whole class, teacher-led instruction with little individualization, whereas special education teachers function largely as assistants in support of special education students and other students in need, within the existing classroom context. Although several exceptions were noted for each of these general findings, overall the consistency of conclusions—drawn across studies ranging widely in grade level, subject matter, geographical location, specific setting, and student characteristics—was remarkable. In short, it appears that the concerns about co-teaching raised years ago by Boudah, Schumacher, and Deshler (1997) were prescient.

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On a positive note, it can be concluded that teachers and administrators were satisfied overall, or in some cases very enthusiastic, with co-teaching as presently practiced, and that most objections raised in these investigations reflected specific co-teaching circumstances (e.g., compatibility of co-teachers, administrative support) rather than the practice of co-teaching itself. These conclusions, however, must be tempered by the fact that participants in nearly one third of the investigations were selected as being outstanding examples of co-teaching, and that most of the remaining teachers had volunteered for (or at least not objected to) these assignments. And, as Baker and Zigmond (1995) noted, it is difficult to implement a policy based on volunteerism.

Examined critically, however, the practice of co-teaching as described in these investigations can hardly be said to resemble the truly collaborative models described by, for example, Cook and Friend (1995) or Walther-Thomas et al. (2000).

If the qualitative research to date represents general practice, it can be stated that the ideal of true collaboration between two equal partners—focused on curriculum needs, innovative practice, and appropriate individualization—has largely not been met. Classroom instructional practices have not changed substantially in response to co-teaching. Classroom instruction has generally continued as whole class and lecture driven, and special education co-teachers have generally attempted to fit within this model to deliver assistance to students in need. Practices known to be effective and frequently recommended—such as peer mediation, strategy instruction, mnemonics, study skills training, organizational skills training, hands-on curriculum materials, test-taking skills training, comprehension training, self-advocacy skills training, self-monitoring, or even general principles of effective instruction (e.g., Mastropieri & Scruggs, 2006)—were only rarely observed. As a consequence, the co-teaching model of instruction is apparently being employed far less effectively than is possible. As noted earlier by Zigmond and Baker (1994) of inclusion classes, students with special needs are receiving good general education instruction, with assistance—but are they receiving a *special* education? Results of the present synthesis suggest they are not.

If the qualitative research to date represents general practice, it can be stated that the ideal of true collaboration between two equal partners—focused on curriculum needs, innovative practice, and appropriate individualization—has largely not been met.

The present results can be linked to more general characterizations of teacher collaboration. Hargreaves (1994; see also Hargreaves, 2003) suggested that teacher collaboration can lead to increased confidence, which can lead in turn to more experimentation and risk-taking, and ultimately continuous improvement. However, genuine collaboration must be spontaneous, voluntary, unpredictable, and oriented toward development. In contrast, co-teaching as described

in the present qualitative studies contains many features of what Hargreaves (1994) referred to as “contrived collaboration.” Although many of the pairings described in these investigations were voluntary (and some were experimental and innovative), overall they were regulated by administrators (often imperfectly), fixed in time and space, and predictable. Such a collaboration “diverts teacher’s efforts and energies into simulated compliance with administrative demands that are inflexible and inappropriate to the settings in which they work” (Hargreaves, 1994, p. 208).

There is a further issue. For such collaboration to be effective, the individuals in each pair should be on an equal footing (unless it is mutually understood that one of the pair is clearly advanced in, for example, experience, expertise, or professional judgment, as in mentoring pairings). In co-teaching, however, the general education teacher—because of her ownership of the classroom, the curriculum, the content, and most of the students—is very often in the dominant role, regardless of experience, expertise, or judgment. Therefore, the overall tilt of the classroom is typically in the direction of the general education teacher, where whole-class, teacher-led instruction is the rule, and the special education teacher applies assistance only within the context of the existing classroom structure. That this role is sometimes mediated by a high level of content knowledge on the part of the special education teacher suggests that the special education teacher may be more accepted only to the extent to which she resembles the general education teacher. In these circumstances, a truly collaborative relationship—in the words of Rice and Zigmond (2000), “a shared teaching space with a diverse student group, shared responsibility for planning and for instruction, and substantive teaching by both co-teaching partners” (p. 196)—is very unlikely to develop.

The participants of the investigations represented in this metasynthesis cannot be characterized as a random sample, and to that extent, the relationship between the present observations and the population as a whole is unknown. In some cases (e.g., Hazlett, 2001), co-teachers declined to participate, citing problems in the co-teaching relationship they did not wish to discuss. Further, 10 of the 32 investigations had been identified as

outstanding examples of successful co-teaching (and none specifically selected as a negative example). It seems likely, then, that the studies included represent a more favorable picture of co-teaching than exists in general.

Neither, however, should the generalizability of the present findings be discounted entirely. The reports included in this metasynthesis represented a substantial number of teachers and administrators, in a wide variety of settings and situations. Nevertheless, we were struck by the remarkable consistency of the findings. For example, in 21 of the investigations, general education teachers maintained that a minimal student skill level was an important criterion for successful inclusion; none of the other investigations specifically contradicted this conclusion. Very similar positions were voiced on the importance (and often, the challenges) of planning time in 30 of the investigations; there were no disconfirming reports. Twenty-five of the investigations characterized the special education teacher's role as an assistant or in some way subordinate (although a smaller number of investigations described different roles). The large size and diversity of the sample and the consistency of many of the results argue strongly that the present conclusions are very suggestive of contemporary practice.

Future research could address the means by which individual schools are able to develop truly collaborative or genuine partnerships, and the specific gains that can be realized by such practices. Additionally, further efforts in the area of qualitative research synthesis could help bring the voices of individual students, teachers, and administrators into the domain of public discourse and help to strengthen the impact of qualitative research. It is hoped that the present effort represents one useful step in that direction.

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