

Paraeducator Training Materials to Facilitate Inclusive Education: Initial Field-Test Data

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Abstract

This study presents initial field-test evaluation feedback on training materials designed to help prepare paraeducators to assist in the provision of special education in inclusive schools. Feedback was collected from 213 paraeducators who participated in the course, *Paraeducator Entry-Level Training for Supporting Students with Disabilities*, 105 who participated in the course, *Supporting Students with Challenging Behaviors: A Paraeducator Curriculum*, and the 23 instructors who taught a combined total of 20 sections of these courses in a variety of formats (e.g., face-to-face, interactive TV, intensive summer institute). Findings indicated that paraeducators gained new knowledge, perspectives, and skills that had direct application in their work. Both paraeducators and course instructors rated the materials favorably and provided feedback to improve them. Implications are offered for infusing paraeducator content into school-based staff development as well as training programs for prospective special and general education teachers.

Among the numerous and varied roles of today's special educators, being prepared to train and supervise the work of paraprofessionals has emerged as a national priority (IDEA Partnerships, 2001). Despite its importance, the literature suggests that little attention has been paid to these topics in preservice personnel preparation programs for special educators (French & Pickett, 1997; Giangreco, Edelman, Broer & Doyle, 2001; Salzberg & Morgan, 1995). This situation exists despite the fact that there is a growing set of paraprofessional training materials (CichoskiKelly, Backus, Giangreco & Sherman-Tucker, 2000; Doyle, 2002; French, 1998; Ghery, York-Barr & Sommersness, 2002; Institute on Community Integration, 1999; Parsons & Reid, 1999; Salzberg, Morgan, Gassman, Pickett & Merrill, 1993; Steckelberg & Vasa, 1998) and information for special educators about how to direct the work of paraprofessionals (Doyle & Gurney, 2000; French 2001; Giangreco, 2001; Morgan & Ashbaker, 2001; Pickett, 1999; Pickett & Gerlach, 1997; Wallace, Shin, Bartholomay & Stahl, 2001).

The *Individuals with Disabilities Education Act Amendments of 1997* (IDEA) (20 U.S.C. 1400 et seq.) focused renewed and increased attention on parapro-

fessionals as a support service within special education. Although the IDEA has always sought to ensure that students with disabilities receive their education from *qualified professionals* (e.g., special educators, speech-language pathologists, physical therapists, occupational therapists, school psychologists) (34 CFR §§ 300.23), only the most recent amendments to the IDEA in 1997 specifically allowed for paraprofessionals who are "*appropriately trained and supervised . . . to assist in the provision of special education and related services to children with disabilities*" (20 U.S.C. 1412 (a)(15)(B)(iii)). Yet, nowhere does the IDEA specify what constitutes "*appropriately trained and supervised*;" to date this has been left to state and local education agencies to determine.

When the dominant model of service delivery was the special education classroom, special educators, as the qualified professionals, were physically present in the classroom virtually all of the time. They were available to provide ongoing on-the-job training and mentoring of paraprofessionals (hereafter referred to as paraeducators) by: (a) reviewing teacher-planned lessons, (b) making curricular decisions, (c) demonstrating effective instructional practices,

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(d) developing adaptations, (e) modeling constructive interactions with students, (f) developing data collection systems, (g) monitoring paraprofessional performance, (h) providing feedback, and (i) making ongoing programmatic adjustments.

The inclusion of students with an ever-increasing range of disabilities and support needs in the regular education classroom, including those with severe and multiple disabilities, means that special educators often are dispersed across several classrooms. Therefore, they are not physically present as much as in the past to provide the on-the-job training and mentoring that has historically been the bedrock of informal paraeducator personnel preparation. This changing landscape is reflected in an increasing and recent body of literature that specifically addresses the utilization of paraeducators to support students with the full range of disabilities within regular education classrooms (Downing, Ryndak & Clark, 2000; Doyle, 2002; Giangreco, Broer & Edelman, 1999; 2001; 2002; Giangreco, Edelman & Broer, 2001; Marks, Schrader & Levine, 1999; Minondo, Meyer & Xin, 2001; Mueller & Murphy, 2001; Palladino, Cornoldi, Vianello, Scruggs, & Mastropieri, 1999; Riggs & Mueller, 2001; Werts, Zigmond & Leeper, 2001).

A relatively small number of existing materials are specifically designed to address the training of paraeducators to work in inclusive classrooms assisting students with a full range of disabilities and support needs (Ghere, York-Barr & Sommersness, 2002). Existing materials also vary on characteristics such as: (a) philosophical orientation, (b) focus and topical content, (c) suggested roles of paraeducators, (d) level of replicability, (e) availability, and (f) cost. With the exception of a small set of training models that focus narrowly on techniques such as delivering instructional prompts, reinforcement, error correction, or facilitating peer-mediated social interactions (Martella, Marchand-Martella, Miller, Young & Macfarlane, 1995; Parsons & Reid, 1999; Storey, Smith & Strain, 1993), one characteristic that more broad-based contemporary paraeducator training materials share in common is an absence of widely available data attesting to their utility.

The purpose of this article is to share initial field-test data based on the use of training materials designed specifically to address entry-level training of paraeducators who assist in the provision of special education in inclusive settings. In part, these data explored the use of the training materials in a *typical*

class format (i.e., participants and instructors met face-to-face for 3 hours per unit, weekly for consecutive weeks) and *alternative delivery formats* (e.g., intensive summer institute, interactive TV, monthly sessions) in the rural state of Vermont and a rural central school district in upstate New York. These data begin to fill a gap in the available literature by sharing feedback on these paraeducator training materials from the perspectives of both course instructors and paraeducators. Such information can be useful to school-based personnel interested in training paraeducators in inclusive schools as well as to college and university faculty in their preparation of special educators.

Method

Design

This study was a quantitative, descriptive evaluation of two sets of paraeducator training materials, *Paraeducator Entry-Level Training for Supporting Students with Disabilities* (CichoskiKelly et al., 2000) and *Supporting Students with Challenging Behaviors: A Paraeducator Curriculum* (Backus & CichoskiKelly, 2001) used to teach courses for paraeducators. These materials are part of a set designed to be used in sequence (see Tables 1 and 2). A total of 20 sections of the courses were taught, 13 of *Paraeducator Entry-Level . . .* and 7 of *Supporting Students with Challenging Behaviors . . .* during the 99-00 and 00-01 school years.

Settings and Participants

Seventeen of the 20 courses were taught in public schools in the rural state of Vermont (n=15) and a rural, central school district in upstate New York (n=2) where students with disabilities were included in general education classes as the primary model of service delivery. In these settings the course participants (i.e., paraeducators) and instructors (e.g., special educators) were employees of the respective schools. One section of each of the two courses was taught at a small private college by two different professors in an intensive summer institute format. This consisted of two units per day for three days (*Paraeducator Entry-level . . .*), a weekend break, two units per day for two days (*Supporting Students with Challenging Behaviors*). Practicum follow-up for both courses occurred the following Fall. The other section was co-taught via an interactive TV network. The broadcast site, which hosted on-site participants, was located at a state University and was linked to two additional sites in the

Table 1

<i>Summary of "Paraeducator Entry-Level Training . . ."</i>	
Category	Characteristics
<i>Philosophical Orientation:</i>	Emphasizes the role of the paraeducator as a valued member of a collaborative team and practices that are family-centered and culturally sensitive in inclusive settings.
<i>Focus and Topical Content:</i>	Focuses on the initial and most essential entry-level knowledge and skills necessary for paraeducators. Includes six, 3-hour units: (1) Collaborative Teamwork, (2) Inclusive Education, (3) Families and Cultural Sensitivity, (4) Characteristics of Children and Youth with Various Disabilities, (5) Roles and Responsibilities of Paraeducators and Other Team Members, (6) Paraeducators Implementing Teacher-Planned Instruction.
<i>Basis for Materials:</i>	Literature review, national survey of training needs, input from national and field-based experts.
<i>Suggested Roles of Paraeducators:</i>	Emphasizes the roles of paraeducators assisting in the implementation of instructional and non-instructional plans designed by qualified professionals. Establishes an expectation that paraeducators <i>not</i> be the "exclusive or primary instructors" for a student with disabilities.
<i>Level of Replicability:</i>	Includes Instructor and Participant manuals. A variety of features are included to enhance replicability (e.g., unit objectives, agendas, lesson plans, readings, in-class activities, overhead transparencies, practicum requirements, knowledge reviews [post-tests]). <i>Note:</i> Readings were a combination of new and previously published (reprinted with permission).
<i>Availability:</i>	Available on a nonprofit, cost-recovery basis from National Clearinghouse of Rehabilitation Materials (NCRTM) at Oklahoma State University Instructor Manual: \$23.80 (Order No. 650.048A) Participant Manual: \$25.20 (Order No. 650.048B)
<i>Other Features:</i>	Includes a web site, http://www.uvm.edu/~cdci/paraprep/ with topical slide shows, interactive quizzes, activities, and related web links for each of the six unit topics.

rural northeastern and southwestern parts of the State. It was co-taught by two of the University's professors.

Eleven of the courses were offered for college credit through a cooperative arrangement with the local Community College. The six-unit entry-level course, plus practicum, was offered for 2 credits. The four-unit course on supporting students with challenging behaviors, which also included a practicum component, was offered for 1 credit. The remaining nine sections of these courses were noncredit bearing and offered as inservice training in the schools, though

the delivery and requirements were the same as sections offered for credit.

Sites for training were identified through regional networking that included mailings to school administrators, web posting, and an email distribution list. Sites that volunteered to participate had the cost of instructors and course materials paid for through grant funding in exchange for hosting the courses and collecting evaluative data.

The *Paraeducator Entry-Level . . .* course was taken by 213 paraeducators (regular class format=114; alternate format=99). The vast majority of the

Table 2

<i>Summary of "Supporting Students with Challenging Behaviors..."</i>	
Category	Characteristics
<i>Philosophical Orientation:</i>	Emphasizes the role of the paraeducator as a valued member of a collaborative team and practices that are family-centered and culturally sensitive in inclusive settings.
<i>Focus and Topical Content:</i>	Focuses on knowledge and skills designed to follow entry-level training. Includes four, 3 hour units: (1) Understanding Student Behavior, (2) Gathering Information About Challenging Behaviors, (3) Preventing Challenging Behavior and Teaching Replacement Behaviors, (4) Responding to Challenging Behavior.
<i>Basis for Materials:</i>	Literature review, national survey of training needs, input from national and field-based experts
<i>Perceived Roles of Paraeducators:</i>	Emphasizes the roles of paraeducators assisting in the implementation of positive behavior support plans designed by qualified professionals.
<i>Level of Replicability:</i>	Includes Instructor and Participant manuals. A variety of features are included to enhance replicability (e.g., unit objectives, agendas, lesson plans, readings, in-class activities, overhead transparencies, practicum requirements, knowledge reviews [post-tests]). <i>Note:</i> Readings were a combination of new and previously published (reprinted with permission).
<i>Availability:</i>	Available on a nonprofit, cost-recovery basis from National Clearinghouse of Rehabilitation Materials (NCRTM) at Oklahoma State University Instructor Manual: \$20.00 (Order No. 650.050A) Participant Manual: \$23.20 (Order No. 650.050B)

paraeducators were female and their level of experience ranged from newly hired to several years of experience; more detailed demographic information about the participants is unavailable. Class size ranged from 6 to 34, with all but four sections including 10 to 25 participants. A subset of 105 paraeducators also took the *Supporting Students with Challenging Behaviors...* course. Completion of the entry-level course or obtaining instructor permission was a prerequisite for taking the *Supporting Students with Challenging Behaviors...* course.

A total of 25 instructors participated in teaching the courses. The discrepancy between the number of course sections (n=20) and the number of instructors is accounted for by the fact that three schools relied on team teaching or co-teaching across course units. Although two state University faculty co-taught two of the entry-level classes (one in each format), no data from them are included since they were co-authors of the training materials. Therefore data are reported from 23 instructors.

Procedures

Course instructors were provided with pre-publication versions of an *Instructor's Manual* for the course they were teaching and a sufficient number of *Participant's Manuals* for each paraeducator. These manuals included all the basic information and materials needed to teach the course (e.g., objectives, outlines, agendas, lesson plans, activities, readings, overhead masters, knowledge reviews/quizzes, practicum requirements). Summary descriptions of the courses are included in Tables 1 and 2.

It was up to the instructor to choose a course format based on their school's needs and schedule. The "regular" format was characterized by teaching one unit (3 hrs.) per week for consecutive weeks in a traditional face-to-face arrangement. The "alternative" formats included all variations that differed from the "regular" format. Alternative formats included: (a) interactive TV, (b) intensive summer institute (two units per day with Fall practicum), (c) units distributed across existing inservice training days over 2

months, and (d) units taught once per month.

It was also up to the instructors to take care of all logistical aspects of course (e.g., scheduling, space, materials preparation). Although all the instructors used the materials and activities included in the manuals, the Instructor's manuals also included a page labeled "Make it Your Own." This page encouraged instructors to make adjustments, additions or substitutions to meet local and individual needs.

Data Collection and Analysis

Following each unit, two types of information were collected from the paraeducators. First, as part of an end-of-class activity, paraeducators were asked to complete a 10-question, multiple-choice, quiz (called *Knowledge Review*) designed to assess basic knowledge of each unit's content. The original study design, which included both pre- and post-testing, was abandoned because paraeducators in early cohorts expressed discomfort and dropped out of the courses when they learned they would be pre-tested. Given the purpose of the project (i.e., to develop and field-test paraeducator training materials), the research team decided that it was more important to have a greater number of paraeducators participate in the training and provide feedback than the potential value gained from collecting pre-test data.

Second, the paraeducators were asked to complete an evaluation of each unit. This was an evaluation of the unit's materials and content, not an evaluation of the instructor. Using a four-option Likert-style questionnaire, they were asked to rate the: (a) importance of the objectives, (b) relevance of the required readings, (c) understandability of the readings, (d) usefulness of the activities, (e) understandability of the activities, (f) quality of unit materials, (g) relevance of the practicum requirements, and (h) understandability of the practicum requirements. The questionnaire also included space for the paraeducators to respond to two queries: "What was the most important thing that you learned from this unit?" and "Please use the rest of this page to make suggestions for improving the objectives, required readings, activities, and practicum requirements for this unit."

A similar Likert-style questionnaire was completed for each unit by instructors. They responded to all the same queries as the paraeducators. Additionally, they were asked to rate the helpfulness and understandability of the *lesson plan* provided in the Instructor's

manual for each unit. Space was available for the instructors to respond to the statement, "Please use the rest of this page to make suggestions for improving the objectives, required readings, activities, and practicum requirements for this unit."

A mainframe version (8.1) of SAS (2000) was used to calculate all statistics. In addition to basic descriptive statistics, chi-square was applied to the categorical Likert-style data to explore differences in paraeducator responses based on class format. Similarly, *t*-tests were applied to the data from *Knowledge Reviews* (based on total number correct) to explore differences based on class format.

Missing Data

The number of paraeducator responses presented in this study varies by unit and question. There were four identified factors that contributed to this variation. First, some paraeducators were absent from individual sessions or did not turn in documentation at the end of each class. Secondly, some of the paraeducators did not respond to Likert-style questions 7 and 8 (pertaining to practicum) or to the narrative questions, which were all on the second page of the questionnaire. This occurred in situations where the unit evaluation forms were distributed on a double-sided piece of paper, as opposed to two-pages stapled together. Finally, unit evaluation data from 34 paraeducators for units 5 and 6 of the *Paraeducator Entry-level...* training were reported by one instructor as lost in a house fire.

Findings

Posttests

As shown in Table 3, results of the *Knowledge Reviews* (posttest quizzes) indicated that paraeducators scored in the upper ranges across all units in both the *alternate* and *regular* formats. Statistically significant differences between the average number of correct responses in the *alternate* and *regular* formats were noted in units 1, 2, 4 and 6 of the *Paraeducator Entry-level* course and in units 1-3 of the *Challenging Behaviors...* course. In all instances the mean scores on the *Knowledge Reviews* were higher in the *alternate* format at $p < .01$, with *t* values ranging from 2.60 (*Entry-level...*, Unit 1) to 4.50 (*Entry-level...*, Unit 2). Although statistically significant, these differences are of questionable practical significance since the differences in the mean scores were small and tightly clustered at the upper end of the 0 to 10 range.

Table 3

Participant Posttest Mean Scores		N	M	SD
<i>Paraeducator Entry-level . . .</i>				
Unit 1	Total	191	9.10	1.06
	Alternate Format	89	9.31	1.06
	Regular Format	102	8.92	1.04
Unit 2	Total	183	8.68	1.49
	Alternate Format	80	9.21	1.20
	Regular Format	103	8.26	1.56
Unit 3	Total	189	8.86	1.38
	Alternate Format	89	9.02	1.28
	Regular Format	100	8.71	1.45
Unit 4	Total	192	8.93	1.30
	Alternate Format	89	9.19	1.06
	Regular Format	103	8.71	1.44
Unit 5	Total	177	9.18	1.18
	Alternate Format	89	9.30	1.22
	Regular Format	88	9.06	1.13
Unit 6	Total	176	9.39	0.89
	Alternate Format	86	9.58	0.73
	Regular Format	90	9.20	1.00
<i>Supporting Students with Challenging Behaviors . . .</i>				
Unit 1	Total	102	9.15	0.91
	Alternate Format	33	9.61	0.83
	Regular Format	69	8.94	0.87
Unit 2	Total	99	8.95	1.29
	Alternate Format	33	9.61	0.97
	Regular Format	66	8.62	1.31
Unit 3	Total	96	9.07	1.11
	Alternate Format	31	9.55	0.62
	Regular Format	65	8.85	1.21
Unit 4	Total	80	9.65	0.62
	Alternate Format	32	9.75	0.57
	Regular Format	48	9.58	0.65

Participant Feedback

Overall feedback from paraeducators indicated that they favorably viewed the objectives, readings, activities, materials, and practicum requirements included in the two courses. Complete unit-by-unit results for all evaluation questions are available to the reader online at www.uvm.edu/~cdci/paraprep/fieldtestdata.html under the heading labeled, “Supple-

mental Data.” Results indicated that the *objectives* of the course were most favorably perceived. Across the ten units, 95% to 99% of the paraeducators rated the course *objectives* as “important” or “very important.” This was followed by the *readings* and in-class *activities*. Across the ten units, 91% to 98% of the paraeducators rated the course *readings* as “relevant” or “very relevant”, while 86% to 97% rated the

readings as “understandable” or “very understandable”. A few paraeducators found some of the readings “a little too long” and expressed concern about the reading level of the articles; “The language of this program is at a college level.” Narrative responses suggest that the slightly lower ratings for the understandability of the readings may be attributable to the wide variation in reading skills of the paraeducators. Also, a small set of paraeducators indicated that they found the readings within some units repetitious. Ratings of the *activities* followed a similar pattern (see online data). Narrative responses suggested that the extent to which activities were perceived favorably by paraeducators was variable and individualized, though the majority of comments were positive (e.g., “All the activities were interesting and raised consciousness.”)

Although still in the positive range, with 77% to 95% of all responses in the top two rating categories, *materials* and *practicum requirements* were rated less favorably. A review of the narrative comments suggests that the slightly lower ratings with regard to the *quality of the materials* were primarily attributable to the use of pre-publication materials which included some page misnumbering, typographical errors, problems with photocopy quality, small print size on some readings, and other technical errors.

Slightly lower ratings of the *practicum requirements* appear to be attributable to the wide range of variations of students and situations encountered by paraeducators. Paraeducators sought practicum requirements that more closely matched their individual circumstances. For some paraeducators, the practicum activities provided new and basic opportunities. For example, one paraeducator wrote, “This is the first time I have requested and seen an IEP.” The course materials included a provision that encourages paraeducators and instructors to substitute and individualize practicum requirements if those included in the manuals were not the most appropriate.

A chi-square comparison of the participant feedback data, by format (alternate and regular), indicated that 90% of the variables ($n=72$) were not statistically different at the $p < .01$ level. Ten percent of the variables ($n=8$) had statistically significant differences; all were in the *Paraeducator Entry-level* course (i.e., Collaboration unit, questions 2, 3, 4, 7; Inclusion Unit, question 3; Families Unit, questions 6, 7; Characteristics Unit, question 6). The chi-square values ranged from Inclusion Unit/Question 3, $\chi^2(2, N=177) = 9.28, p < .01$ to Collaboration Unit/Question 7, χ^2

(3, $N=167$) = 24.40, $p < .01$. In all cases the paraeducators’ ratings were slightly higher in the *alternate* format. These differences are of questionable importance since the overall ratings across both formats were predominantly in the top two rating categories. Additionally, such comparisons do not provide any confidence that the few identified differences were actually attributable to the format of the classes. Other variables co-occurring with format, such as instructor characteristics (e.g., experience, content knowledge, teaching style), could be the reasons for the differences.

In response to “*What was the most important or useful thing that you learned from this unit?*”, paraeducators responses consistently fell in six categories: (a) affirmation, (b) student-family perspective, (c) importance of topics, (d) reference points, (e) strategies, and (f) energized to act. First, several paraeducators commented that the courses were “affirming” of their value and contributions to the education of children with and without disabilities; “I learned that as a paraeducator I’m on the right track.”

Secondly, paraeducators reported that the course helped them to consider the perspectives of students and families by “being aware of students’ feelings” and to “look at the person before the disability.” As one paraeducator wrote, “This opened my eyes to my own prejudices toward families who are economically disadvantaged.” Third, paraeducators consistently commented that they gained new information and perspectives on the importance of each of the topics presented in the units (e.g., “teamwork,” “how best to help a student without hovering,” “confidentiality,” “characteristics of students with disabilities,” “having a plan from the teacher,” “functions of behavior”).

The readings and activities gave several paraeducators a reference point to better understand their own roles, situations, and the impact of their work on students. “[Before the course] I wasn’t told what my roles were. Now I know! I know now the roles of the team and I feel more comfortable with my job.” These reference points highlighted both positive aspects of the paraeducators’ jobs as well as exposed problems. For example, while some paraeducators wrote things such as, “I learned I am very lucky to work at the school I am in! We have outstanding communication and wonderful teams . . .,” others shared different realizations. “I learned that I am not part of a team.”

In any event, paraeducators made several comments suggesting that the reference points encouraged reflection. “I learned that my behavior and the way I interact with my students could have an impact on his or her actions and reactions in the classroom.” “I need to conquer my own bias.”

Several experienced paraeducators wrote comments such as, “I wish I could have taken this course my first year on the job.” and “I think all paraeducators should have an opportunity to take this course before or shortly after being hired.” Others came to realize that educating the student with a disability was a shared responsibility, rather than theirs alone. “The most important thing I learned from this unit was that it is not my job *alone* to be teaching any special needs child. It has become *teamwork* with my special educator and my input is very important. Plans are implemented, then reviewed periodically.”

Paraeducators wrote comments indicating that they appreciated learning strategies that they could apply in the classroom. “I learned some better ways to communicate and collaborate.” A paraeducator wrote that she learned “. . . ways to include the student in regular class activities.” Another paraeducator wrote, “Curriculum overlapping and multi-level curriculum opened my eyes to how special education children naturally are being included without even recognizing it.” Paraeducators listed a variety of strategies they found helpful such as how to: ask teacher colleagues for information, collect data, encourage social interactions with peers, teach skills, and encourage positive student behaviors.

The impact of the training left some paraeducators feeling energized to act, “It inspired me to want to make changes in the way I work with my student . . .” “This [teaching strategies] will be very useful to me. Can’t wait to use it!” Many of the paraeducators wrote statements indicating that the course had left them “wanting more” information and time to explore other topics. The only downside to this enthusiasm was the often written lament, “Too bad the general educators, special educators and other staff didn’t take this course!”

The most consistent suggestion for improvement pertained to the *Knowledge Reviews*. Paraeducators reported that some of the quiz questions were “wordy,” “confusing,” and “tricky.” Specifically, this was noted for questions that followed a negative format, such as “*Which of the following is not an example*

of . . . ?” or when the choice included combinations (e.g., a and b; a, c, and d).

Instructor Feedback

Instructor ratings closely paralleled those of the paraeducators, both in terms of level and stratification (see online data). Across the ten units, 92% to 100% of the instructors rated the *objectives* as “important” or “very important”. Ratings pertaining to readings and activities were predominantly in the top two rating categories. Comments suggested that some instructors found the readings repetitive and difficult for some of the paraeducators to read. Instructors’ perceptions of activities were variable and influenced by individual preferences. An activity (e.g., role playing, draw an ideal team member) that one instructor reported liking, another reported disliking.

The two *lesson plan* variables were rated in the top two rating categories by 78% to 100% of the instructors across the ten units. Comments indicated that novice instructors or those less familiar with the content appreciated the detailed nature of the lesson plans. More experienced instructors indicated that they did not need the level of detail that was provided.

Similar to the responses provided by the paraeducators, the instructors gave slightly lower ratings to the *materials quality* and the two *practicum requirements* variables, though nearly all were rated in the top two rating categories by 80% to 100% of the instructors across the ten units. Reasons for the lower ratings were similar to those mentioned by paraeducators, namely the lower pre-publication quality of the manuals (e.g., small font size, photocopy quality) and the need to individualize practicum requirements to better match the wide variation in paraeducator circumstances. Like the paraeducators, the most consistent suggestion for improvement had to do with improving the wording of the quiz questions presented in the *Knowledge Reviews*.

Generally, the narrative responses of instructors were positive, with each identifying different readings or activities that they found particularly helpful or useful; these varied by instructor. As one instructor wrote,

This program was excellent. My students really enjoyed the class. It was put together very well. The information was relevant and strong. It provided great resources for the paraeducators — they will have their manuals to refer to later on. It was well planned and thought out. It was easy to teach because all the directions were so clear. The paraeducators enjoyed all

the activities. They provided “hands-on” activities, helpful to break barriers and get people talking. The paraeducators had a lot of fun and they learned a lot. They are definitely better educated and more knowledgeable than before.

Discussion

The findings indicate that the two field-tested sets of materials used to teach the courses described in this study represent content objectives that are considered important by both paraeducators and those who provide them with training. The findings also indicate that critical aspects of the materials such as the readings, in-class activities, lesson plans (for instructors), and practicum requirements also were rated highly by paraeducators and instructors. Paraeducators who took the courses gained new knowledge, perspectives, and skills that had direct application in their work assisting in the provision of special education for students with disabilities in inclusive schools. Constructive feedback from paraeducators and instructors was used to make changes in the materials and to develop web-based updates (e.g., corrections, alternate activities) and interactive web-based unit information via summary slide shows, interactive quizzes, and links to related resources (www.uvm.edu/~cdci/prlc/).

An equally important finding is that the materials can be successfully used in a variety of course formats with similar positive results. This affords flexibility in delivery to match local needs. This flexibility can be especially important in rural areas given rural issues such as relatively smaller numbers of paraeducators, distance, and a limited pool of qualified instructors. Although the training materials are offered as entry-level, they contain enough content to be valuable for experienced paraeducators as well as those who are relatively new to the role. We concur with the paraeducators who suggested that training of this sort be offered soon after a paraeducator is employed.

Although these data fill a gap in the literature by providing initial field-test data where little currently exists, the reader is cautioned about the following limitations of this study. First, from a methodological perspective, without a paired pretest/posttest comparison, we cannot be certain how much new knowledge was gained by paraeducators as a result of taking the courses. Second, data of the sort presented in this study provide only the most basic types information. Guskey (2002) presented five types of professional development evaluation. This study addressed the first two

types (i.e., Participants’ Reactions, Participant’s Learning) and implemented a third through practicum (i.e., Participants’ Use of New Knowledge and Skills), though no data regarding practicum implementation were collected for analysis. A limitation of this study was inattention to Guskey’s other two categories (i.e., Organization Support and Change, Student Learning Outcomes). For example, in what ways did the paraeducator training affect the organization (e.g., job satisfaction, retention, resource allocation, school climate)? Most importantly, in what ways did paraeducator training affect the work of educational teams and result in positive outcomes for students? Both of these areas represent future research needs.

It should also be noted that participants were practicing paraeducators. It is unknown whether the materials would be as applicable for individuals who were seeking to become paraeducators, but had no experiential frame of reference. Lastly, these paraeducators had easy access to inclusive classrooms to implement their practicum requirements. A layer of logistical complication would be added to find practicum sites in situations where prospective paraeducators were not currently employed in the paraeducator role.

Despite these limitations, these data offer several insights that have implications for those who will be training and supervising paraeducators and those preparing special and general educators. Description of the course materials and the initial consumer feedback can provide a starting point for evaluating and contrasting these materials with other existing paraeducator training materials. Such packaged training materials can be helpful to special educators from an organizational and time-saving perspective. Responding instructors indicated that such materials may be especially helpful to novice special educators and instructors.

Feedback from the study’s participants about the readings, quizzes, and practicum requirements provide valuable insights that can be shared with prospective teachers and special educators. The population of paraeducators represents vast heterogeneity in terms of formal educational backgrounds, experiences, and work situations. This has implications for various aspects of paraeducator training. Although multiple-choice quizzes provided an easily quantifiable assessment method that could be used as in-class activity, it also provided a reminder that a portion of paraeducators may find any type of formal testing anxiety producing. Therefore, instructors are encouraged

to consider alternative ways for paraeducators to demonstrate newly gained knowledge.

The literacy skills of paraeducators are widely divergent, ranging from those with a high school diploma, a subset of whom may have struggled academically, to those with bachelor's and master's degrees. Instructors should be prepared to offer readings that account for the broad range of reading levels. Things as seemingly benign as type size and copy quality matter to consumers. Similarly, practicum requirements should be individualized in order to account for both paraeducator characteristics and contextual factors (e.g., role, student groupings, student characteristics).

These three aspects of paraeducator training highlight a limitation that will likely exist no matter what available training materials are used, namely that any pre-packaged materials, while time-saving, will require some level of individualization and updating as new literature becomes available and as policies and practices change. Therefore, they should be viewed as a starting point from which instructors can modify according to local needs. Additionally, this type of generic training needs to be provided in conjunction with orientation to the school, classroom, and specific students with whom the paraeducator works. Such initial orientation and training should be followed by individually determined ongoing training that matches the paraeducator's job responsibilities.

Special educators should be aware that presenting "exemplary practices" information to paraeducators may validate the current experiences for some and possibly expose perceived inadequacies for others. Such realizations may leave paraeducators in awkward positions. In other words, some paraeducators may experience negative reactions when they gain information suggesting that practices they or team members have been engaging in, and have assumed were positive, are presented in a reading or class activity as problematic. For example, what should a paraeducator do if she comes to realize that she has been asked to assume a primary instructional role with a student but no one has provided information about the student's

characteristics, shared the IEP goals, provided lesson plans, or offered student-specific training? Paraeducators may be hesitant or unaware of how to address these issues, especially given their status within the school hierarchy.

Those providing training to paraeducators must be prepared to constructively address such issues. This is one reason why the first unit in this training series is devoted to collaborative teamwork and includes practicum activities designed to establish lines of communication between the paraeducator and other team members. Also, as suggested by some paraeducators, much of the information included in the course materials may be helpful for other team members (e.g., general education teachers). While organizing joint teacher-paraeducator training can be desirable and effective, it also presents logistical challenges. The course materials described in this article attempt to provide "exemplary practices" information to teachers and special educators using a "back door" approach. The paraeducators who are participating in the training are encouraged to share readings with team members and participate in practicum requirements that directly involve other team members in operationalizing the content of the course units. Lastly, teachers and special educators may be involved in concurrent training about directing the work of paraeducators; an emerging set of information and materials are available for this purpose (Doyle & Gurney, 2000; Giangreco, 2001; Pickett & Gerlach, 1997; Wallace, Shin, Bartholomay & Stahl, 2001).

Preparing special educators to work in today's increasingly inclusive schools with students who experience the full range of support needs requires that they be prepared to train and direct the work of paraeducators. We hope that the information presented in this article will encourage the infusion of information and skill development pertaining to paraeducators in staff development, courses and internship experiences for those preparing to become general and special educators since these professionals will undoubtedly interact with and direct the work of paraeducators.

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