

Paraprofessional Involvement in Self-Determination Instruction for Students With High-Incidence Disabilities

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ABSTRACT: *Although enhancing students' self-determination is advocated as a central element of high-quality special education and transition services, little is known about the ways in which paraprofessionals are involved in promoting self-determination or the extent to which they share teachers' views regarding its importance. The authors surveyed 223 paraprofessionals from 115 randomly selected public schools to examine their perspectives on promoting self-determination among students with high-incidence disabilities. Overall, paraprofessionals attributed high levels of importance to each of the 7 component elements of self-determination (i.e., choice making, decision making, problem solving, goal setting and attainment, self-advocacy and leadership, self-management and self-regulation, and self-awareness and self-knowledge). The extent to which paraprofessionals reported providing instruction addressing each of the 7 components of self-determination was moderate, with average ratings all slightly above the midpoint of the scale. This article presents implications for the involvement of paraprofessionals in supporting the development of self-determination among students with high-incidence disabilities, along with recommendations for future research.*



Over the past 2 decades, self-determination has emerged as an important construct within the field of special education and secondary transition ser-

VICES. This emphasis on promoting students' self-determination is now evident within legislative and policy initiatives (i.e., Field & Hoffman, 2002; Individuals With Disabilities Education Act, IDEA, 2004), state standards (Konrad,

Walker, Fowler, Test, & Wood, 2008; Wehmeyer, Field, Doren, Jones, & Mason, 2004), and professional competencies (Council for Exceptional Children, 2009; National Alliance for Secondary Education and Transition, 2005). Concurrently, mounting empirical evidence suggests that self-determination is strongly associated with improved postschool outcomes (Test, Mazotti, et al., 2009; Wehmeyer & Palmer, 2003), and numerous studies have demonstrated that self-determination can be effectively taught to students with high-incidence disabilities (Carter, Lane, Crnoblj, Bruhn, & Oakes, 2011; Test, Fowler, Brewer, & Wood, 2005; Wehmeyer, Palmer, Lee, Williams-Diehm, & Shogren, 2011).

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As a result, best and recommended practices now highlight the importance of providing students with disabilities with meaningful opportunities to develop the skills, attitudes, and behaviors that can enhance their self-determination (Carter, Lane, Pierson, & Glaeser, 2006; Cobb, Lehmann, Newman-Gonchar, & Alwell, 2009; Landmark, Ju, & Zhang, 2010). Instructionally, self-determination is often addressed at the level of the following component skills: choice making, decision making, problem solving, goal setting and attainment, self-advocacy and leadership, self-management and self-regulation, and self-awareness and self-knowledge (Wehmeyer, Agran, & Hughes, 2000; Wehmeyer & Field, 2007). Opportunities to develop greater capacities in each of these areas can be provided formally and informally through an array of curricular materials, instructional strategies, and naturalistic approaches embedded throughout the school day (Konrad et al., 2008; Wehmeyer et al., 2004). However, relatively few studies have explored the avenues through which students with high-incidence dis-

abilities are provided opportunities to develop these skills through school.

Prior descriptive studies are consistent in their findings that self-determination is a highly valued instructional domain among both special and general education teachers (Cho, Wehmeyer, & Kingston, 2011; Mason, Field, & Sawilowsky, 2004; Stang, Carter, Lane, & Pierson, 2009; Wehmeyer et al., 2000; Zhang, Wehmeyer, & Chen, 2005). For example, Carter, Lane, Pierson, and Stang (2008) found more than two thirds of high school teachers rated teaching problem solving, self-management and self-regulation, decision making, and goal setting and attainment skills as very important relative to other instructional priorities in their classroom. Moreover, some of these same studies suggest teachers regularly focus instructional efforts on this educational domain. Stang et al. reported that more than 85% of elementary and middle school teachers said they sometimes or often taught each of the seven self-determination component skills in their classrooms. Given the challenges many students with high-incidence disabilities experience in the area of self-determination (Carter et al., 2006; Carter, Trainor, Owens, Swedeen, & Sun, 2010), identifying promising avenues for teaching and reinforcing self-determined behavior remains an important endeavor.

Although general and special educators hold primary responsibility for making instructional decisions, paraprofessionals are playing an increasingly prominent role in reinforcing and augmenting these teachers' efforts within the classroom (Study of Personnel Needs in Special Education, 2002; U.S. Department of Education, 2004). Data from the 2007–2008 school year indicated that 455,820 special education paraprofessionals worked in public and charter schools in the United States (Keigher & Gruber, 2009). Indeed, in many states, the ratio of paraprofessional full-time equivalents (FTEs) to special educator FTE exceeds 1.0 (Giangreco, Hurley, & Suter, 2009). Although actual practices sometimes diverge from articulated policies (Carter, O'Rourke, Sisco, & Pelsue, 2009; Fisher & Pleasants, in press; Giangreco, 2010; Giangreco & Broer, 2005), appropriate roles for paraprofessionals can include providing one-to-one tutoring (if such tutoring is scheduled at a time when a student would not

otherwise receive instruction from a teacher), assisting with classroom management, and providing instructional support services under the direct supervision of a highly qualified teacher (No Child Left Behind Act of 2001, Title 1, Section 1119[g][2]). Despite the fact that paraprofessionals—when appropriately trained and supervised—can assist in the provision of special education and related services, little empirical research has addressed the roles these staff play in fostering self-determination among the students with whom they work.

In this study, we sought to determine whether paraprofessionals also affirmed the importance of promoting self-determination among the students with whom they worked, as well to gauge the extent to which these staff are involved in providing instructional support addressing each of seven self-determination skills. Although highly qualified teachers should set instructional

Although highly qualified teachers should set instructional priorities for students, the degree to which paraprofessionals also hold similar views regarding the importance of these [self-determination] domains could impact whether and how opportunities are provided for students to learn and practice these skills throughout the school day.

priorities for students, the degree to which paraprofessionals also hold similar views regarding the importance of these educational domains could impact whether and how opportunities are provided for students to learn and practice these skills throughout the school day. The few articles addressing this issue have cautioned that paraprofessionals may inadvertently hinder, rather than enhance, student self-determination (Giangreco, Yuan, McKenzie, Cameron, & Fialka, 2005; Miondo, Meyer, & Xin, 2001). Thus, it would be instructive to ascertain how paraprofessionals themselves view the importance of fostering such skills. Similarly, given growing concerns regarding the proper roles of paraprofessionals in the education of students with disabilities, it is important to determine the extent to which these staff are actu-

ally involved in providing instruction related to this educational domain. At present, the extent to which paraprofessionals play a role in addressing student self-determination is unclear. Finally, the views of paraprofessionals are likely influenced by multiple factors, including their prior training, education, experience, and familiarity with the broader self-determination construct. An understanding of these factors could inform efforts to strengthen the quality of the training, direction, and supervision of paraprofessionals working with students with disabilities.

PURPOSE

The purpose of this study was to examine paraprofessionals' perspectives on promoting self-determined behavior for students with high-incidence disabilities. We examined four research questions:

- How do paraprofessionals view the importance of providing instruction in each of seven self-determination skill domains relative to other priorities?
- To what degree do paraprofessionals report spending time teaching each skill?
- What is the relationship between the importance and actual instructional time devoted to each domain?
- What paraprofessional characteristics (e.g., gender, years of experience, educational attainment, familiarity with the construct, access to professional development activities) predict ratings of self-determination?

METHOD

PARTICIPANTS

Participants in this survey study were 225 paraprofessionals from 115 randomly selected public schools. Consistent with national patterns, the majority of paraprofessionals were female and had not obtained a college degree (see Table 1). Participants averaged 10.10 years ($SD = 6.70$ years) experience working as a paraprofessional. When asked about the settings in which they

TABLE 1

Participant Characteristics by School Level

Variable	Elementary n = 112		Secondary n = 109		Combined N = 223	
	n	%	n	%	n	%
Gender						
Female	109	97.32	101	92.66	212	95.07
Male	3	2.68	8	7.34	11	4.93
Years as a paraprofessional						
0-5	33	31.73	21	20.59	55	26.57
6-10	34	32.69	36	35.29	70	33.82
11-15	17	16.35	21	20.59	38	18.36
16-35	20	19.23	24	23.53	44	21.26
Highest degree						
High school	23	20.54	28	25.93	51	22.97
Some college (no degree)	35	31.25	29	26.85	66	29.73
Associate's degree	23	20.54	16	14.81	39	17.57
Bachelor's degree	25	22.32	31	28.70	56	25.23
Master's degree	3	2.68	2	1.85	5	2.25
Other	3	2.68	2	1.85	5	2.25
Disability categories served ^a						
Learning disability	85	75.89	99	90.83	186	83.41
Autism	76	67.86	76	69.72	154	69.06
Emotional disturbance	65	58.04	80	73.39	147	65.92
Intellectual disabilities	56	50.00	65	59.63	122	54.71
Speech/language impairment	56	50.00	58	53.21	114	51.12
Multiple disabilities	28	25.00	34	31.19	62	27.80
Other health impairment	27	24.11	23	21.10	50	22.42
Visual impairment	10	8.93	20	18.35	32	14.35
Orthopedic impairment	8	7.14	14	12.84	22	9.87
Hearing impairment	7	6.25	10	9.17	17	7.62
Traumatic brain injury	3	2.68	13	11.93	16	7.17
Deaf-blindness	6	5.36	4	3.67	10	4.48
Primary work settings						
Both general and special ed.	39	34.82	48	44.86	87	39.37
Mostly general education	41	36.61	36	33.64	78	35.29
Mostly special education	26	23.21	17	15.89	43	19.46
Other	4	3.57	4	3.74	9	4.07
Multiple settings indicated	2	1.79	2	1.87	4	1.81

Note. Two respondents did not specify school level status. Percentages are based on the number of participants who completed the given item.

^aBecause multiple categories could be selected, percentages add up to more than 100%.

primarily worked with students with disabilities, the largest number of paraprofessionals indicated they supported students in both general and special education classrooms (39%) or mostly general education classrooms (35%). Although all of

the participants in this study described the majority of the students with whom they worked most closely as having mild or high-incidence disabilities (see Survey Instrument), these paraprofessionals reported working with students

served under multiple special education categories (see Table 1).

According to administrative rules in the state in which this study was conducted, paraprofessionals (i.e., *aides*) are defined as:

a school employee who works under the direct supervision of a licensed teacher in a school or district whose responsibilities include, but are not limited to, supporting the lesson plan of the licensed teacher, providing technical assistance to the teacher, helping with classroom control or management, and other duties as assigned. Aides may not serve as substitute teachers. (Wisconsin Administrative Code PI 34.01[4]; Wisconsin Department of Public Instruction, 2010, ¶1)

SETTINGS

Paraprofessionals worked with students with disabilities at 68 elementary, 27 middle, and 20 high schools from 27 school districts in Wisconsin. School level was self-reported by paraprofessionals as either elementary, middle, or high school and was collapsed into elementary or secondary (i.e., middle and high school) levels for analytic purposes. Average student enrollment in participating districts was 2,994 students ($SD = 499$; range, 210–24,670 students). School enrollment across participating schools averaged 520 students ($SD = 98$; range, 92–2,061 students). Average ethnicity across schools was 79.2% European American ($SD = 18.7\%$; range, 10.9%–99.1%), 7.3% African American ($SD = 10.6\%$; range, 0%–50.4%), 7.0% Hispanic ($SD = 6.5\%$; range, 0.0%–32.2%), 5.9% Asian American ($SD = 6.4\%$; range, 0.0%–33.3%) and 0.7% other ethnicities ($SD = 0.6$; range, 0%–2.8%). The average percentage of students eligible to receive free or reduced-price meals across these schools was 29.0% ($SD = 17.5\%$; range, 0.6%–83.4%).

SURVEY INSTRUMENT

We asked paraprofessionals to complete a two-page, printed survey consisting of two sections and 23 questions. In the first section, we asked paraprofessionals to provide ratings of seven instructional domains associated with self-determination for the “students with disabilities with whom you work most closely during a typical

school day.” These domains were: choice making, decision making, problem solving, goal setting and attainment, self-advocacy and leadership, self-management and self-regulation, and self-awareness and self-knowledge. First, paraprofessionals rated the importance of each instructional domain using a 6-point, Likert-type scale (1 = low, 6 = high). Specifically, the survey asked: “How important do you think teaching this skill is compared with other instructional priorities for your students with disabilities?” Second, paraprofessionals rated how often they taught each skill to students with disabilities, using a 6-point, Likert-type scale (1 = never, 6 = often). Brief examples of instructional activities accompanied each instructional domain. For example, “teaching students to monitor and evaluate their own behavior, select and provide their own reinforcement, set their own schedule, and to self-direct learning through strategies like self-instruction” was listed adjacent to self-management and self-regulation skills and “teaching students to know and stand up for their rights, to communicate effectively and assertively, and to be an effective leader or team member” was listed next to self-advocacy and leadership skills. These items were adapted from Wehmeyer and colleagues (2000) by making minor wording changes to the item instructions and adding a second response dimension (i.e., frequency of skill instruction). However, consistent with the original survey, our survey did not provide operational definitions for each anchor. Nonetheless, the instrument used in this study had strong internal consistency with coefficient alpha reliabilities of .83 and .87 for the importance and actual instruction scales, respectively. The same tool has been used reliably in previous studies involving more than 1,200 general and special educators and is available by request from the authors (Carter et al., 2008; Stang et al., 2009). Wehmeyer et al. drew upon a functional model of self-determination (e.g., Wehmeyer, 1999) when creating their survey and included component skills of self-determination that could be addressed through instructional efforts.

In the second section, we asked paraprofessionals to provide (a) basic demographic information, including years of experience, gender, and highest level of education; (b) information about their current job position, including school level

(i.e., elementary, middle, high) and primary classroom settings (i.e., mostly general education classrooms, mostly special education classrooms [e.g., resource, self-contained, life skills], both general and special education classrooms equally, other); and (c) a description of the categories of students with disabilities with whom they worked and their own determination of the level of disability experienced by most of the students with whom they worked most closely (i.e., mild disabilities [also called high-incidence disabilities] or moderate to severe disabilities [also called low-incidence disabilities]). We also asked paraprofessionals about (a) their familiarity with the concept of self-determination for students with disabilities using a 3-point Likert-type scale (i.e., not at all familiar, somewhat familiar, very familiar), and (b) the extent to which self-determination strategies are addressed during inservice or other professional development opportunities in their school or district using a 3-point Likert-type scale (i.e., never, sometimes, frequently). In this article, we focus only on findings from paraprofessionals reporting that they worked with students with high-incidence disabilities. Findings from paraprofessionals working with students with low-incidence disabilities are described in Carter, Lane, and Sisco (2011). We estimated the approximate completion time for the questionnaire as less than 15 min.

PROCEDURES

After securing Institutional Review Board approval, we used proportional stratified random sampling to select 40 school districts from among all school districts ($N = 151$) in three different regional service areas in Wisconsin. We selected these service areas because they included school districts serving rural, suburban, and urban communities. We compiled a list of all school districts in the region using a list obtained from the state's Department of Public Instruction. We eliminated special schools (e.g., alternative schools, juvenile detention centers, and transition schools), preschools, and virtual schools from this list.

We created three different sampling frames to capture small-, medium-, and large-sized districts. For purposes of this study, we defined small-sized districts ($N = 68$) as having enroll-

ment sizes less than 1,000 students, medium-sized districts ($N = 71$) as having enrollment sizes between 1,000 and 5,000 students, and large-sized districts ($N = 12$) as having enrollment sizes greater than 5,000 students. We randomly sampled 18 small-sized school districts, 18 medium-sized school districts, and four large-sized school districts. Of these 40 school districts, 10 declined our invitation to participate and six school districts did not respond. In three of the remaining 24 school districts, we did not receive any response from building-level administrators and thus no data were collected. Of the 21 school districts where paraprofessionals completed the survey, two were exclusively elementary school districts (i.e., Grades K–8) and two were exclusively high school districts (i.e., Grades 9–12). The two high school districts, one of the elementary school districts, and another small-sized school district were part of larger consortiums in which administrators wanted to invite all other consortium districts to participate in the study. This resulted in a total of 32 school districts participating in our study: 90 elementary schools, 39 middle schools, and 31 high schools. For this particular article—focused only on paraprofessionals working with students with high-incidence disabilities—paraprofessionals were employed at 68 elementary schools, 27 middle schools, and 20 high schools. (Findings for paraprofessionals working with students with severe disabilities are reported in Carter et al., 2011.)

We sent each school district's special education administrator an invitation to participate, following up by phone and/or e-mail as needed to review the project, answer questions, and request that permission forms be returned for interested districts. When permission was granted at the district level, we followed a similar process with building-level administrators at each school. Eleven school districts opted to have the survey distribution and collection handled at the district level to minimize the burden on building-level administrators; however, permission was still sought at the building level prior to distributing surveys to paraprofessionals. If the building-level administrator granted us permission to distribute the survey to paraprofessionals in their school, we collaboratively developed a distribution process that would be most effective and convenient for

the school. We prepared and sent survey materials to the study liaison at each school, providing step-by-step instructions for distributing surveys to paraprofessionals and returning completed surveys to us. Surveys were distributed in various ways, including campus mailboxes, school/district staff inservice or professional development meetings, weekly school staff meetings, or in person. Paraprofessionals completed surveys individually and anonymously. Options for completed survey return included directly mailing the survey back to us in a prepaid envelope or returning it to the school's point of contact. Respondents were encouraged to contact us—rather than the school liaison—with questions regarding the survey; a few respondents made such inquiries. The estimated overall participation rate for paraprofessionals across schools averaged 86.0% (range, 0%–100%).

STUDY DESIGN AND DATA ANALYSIS PLAN

This study involved descriptive analyses of the self-reported ratings of paraprofessionals who were working primarily with students with high-incidence disabilities. To determine how paraprofessionals evaluate the importance of each skill, we used descriptive statistics to summarize ratings of importance across respondents. Due to small cell sizes for some item-level ratings, the 6-point, Likert-type scale was collapsed into three categories: low (ratings of 1 or 2), medium (ratings of 3 or 4), and high (ratings of 5 or 6) prior to data analysis. After restructuring the data set to create seven variables per participant, we conducted a one-way analysis of variance (ANOVA) across the seven items measuring the importance of self-determined behaviors. A significant ANOVA was followed by a Tukey multiple comparison ($\alpha = .05$) to determine differences in the importance ratings across the items. (The Tukey comparison technique was selected due to the imbalanced cell sizes.) Table 2 reports descriptive statistics of these three categories (frequency counts, percentages of ratings, means, and standard deviations) as well as means and standard deviations for the overall clusters. The same descriptive statistics and significance testing procedures described for the first research question

were used to analyze ratings of how often paraprofessionals teach each of the seven self-determination skills.

Next, we computed Pearson correlation coefficients to examine the relation between paraprofessionals' ratings of the importance and frequency of instruction for each of the seven self-determination domains. Finally, we conducted two stepwise regressions to identify the extent to which paraprofessional characteristics predicted (a) the importance paraprofessionals placed on self-determination skills and (b) the frequency with which these skills are taught. These characteristics included: school level taught (elementary versus middle/high school grade levels), work setting (general, special education, or both settings), gender, years of experience, educational attainment, familiarity with the construct, and prior access to professional development activities. A jackknife procedure detected outliers (Kleinbaum, Kupper, Muller, & Nizam, 1998). The residual sums of squares, the multiple correlation coefficient, and C_p criterion values were examined to determine the most parsimonious set of predictors to retain in the model (Borthwick-Duffy, Lane, & Widaman, 1997). Further, we examined studentized residuals, leverage, and Cook's D values to evaluate the validity of the regression models (Kleinbaum et al., 1998). None of these statistical procedures yielded extreme values thereby suggesting that outliers were not present and, as a result, the regression results were considered accurate. Two students entered all data, with fidelity of data entry assessed for 100% of the surveys. Any data entry errors were corrected.

RESULTS

HOW DO PARAPROFESSIONALS EVALUATE THE IMPORTANCE OF PROVIDING INSTRUCTION?

Overall, paraprofessionals attributed high (i.e., ratings of 5 or 6) levels of importance to each of the seven component elements of self-determination (see Table 2), with mean scores ranging from 4.98 ($SD = 1.15$) for goal setting and attainment to 5.45 ($SD = 0.80$) for problem-solving skills. More than 80% of paraprofessionals rated choice

TABLE 2

Overall Ratings of Skill Importance and Reported Instruction.

Domain	Importance % (n)				Instruction % (n)			
	1 or 2 (Low)	3 or 4 (Medium)	5 or 6 (High)	M (SD)	1 or 2 (Never)	3 or 4 (Sometimes)	5 or 6 (Often)	M (SD)
Choice making	0.90 (2)	18.47 (41)	80.63 (179)	5.18 (0.93)	5.02 (11)	40.18 (88)	54.79 (120)	4.52 (1.29)
Decision making	2.76 (6)	15.21 (33)	82.03 (178)	5.17 (1.08)	17.05 (37)	36.87 (80)	46.08 (100)	4.11 (1.49)
Problem solving	0.45 (1)	11.36 (25)	88.18 (194)	5.45 (0.80)	4.59 (10)	29.82 (65)	65.60 (143)	4.77 (1.18)
Goal setting and attainment	5.00 (11)	20.91 (46)	74.09 (163)	4.98 (1.15)	23.18 (51)	42.73 (94)	34.09 (75)	3.75 (1.47)
Self-advocacy and leadership	2.25 (5)	20.27 (45)	77.48 (172)	5.14 (1.08)	15.77 (35)	38.29 (85)	45.95 (102)	4.16 (1.46)
Self-management and self-regulation	4.05 (9)	21.62 (48)	74.32 (165)	5.04 (1.14)	16.22 (36)	36.94 (82)	46.85 (104)	4.18 (1.47)
Self-awareness and self-knowledge	1.80 (4)	18.02 (40)	80.18 (178)	5.15 (0.94)	12.61 (28)	39.64 (88)	47.75 (106)	4.23 (1.41)
Overall Cluster				36.10 (5.02)				29.60 (7.40)

Note. Percentages are based on the number of participants who completed the given item.

making, decision making, problem solving, and self-awareness and self-knowledge as having high importance relative to other instructional priorities for the students with whom they worked most closely. More than 70% of paraprofessionals also rated goal setting and attainment, self-advocacy and leadership skills, and self-management and self-regulation skills as having high importance. Table 3 displays findings by elementary and secondary levels.

Results of the ANOVA comparing the seven domains indicated statistically significant differences between items, $F(6, 1540) = 4.56, p < .0001, R^2 = 1.75\%$. According to post-hoc Tukey multiple comparison procedures, problem solving, choice making, and decision making were rated significantly higher in terms of importance relative to the other domains, with no significant differences between these three mean ratings. Further, there were no significant differences between the remaining four domains.

*TO WHAT EXTENT DO
PARAPROFESSIONALS REPORT
TEACHING EACH SKILL?*

Paraprofessionals reported that they *sometimes to often* taught each of the seven skills associated with enhanced self-determination, with mean scores ranging from 3.75 ($SD = 1.47$) for goal setting and attainment to 4.77 ($SD = 1.18$) for problem-solving skills (see Table 2). However, choice making and problem solving were the only two skills that more than half of paraprofessionals reported often teaching (i.e., ratings of 5 or 6) to the students with whom they worked.

Results of the ANOVA comparing the seven domains indicated statistically significant differences between items with respect to instructional frequency, $F(6, 1536) = 11.64, p < .0001, R^2 = 4.35\%$. According to post-hoc Tukey multiple comparison procedures, problem solving and choice making were rated significantly higher in terms of instructional frequency relative to the

TABLE 3

Ratings of Skill Importance and Reported Instruction by School Level

<i>Self-determination element</i>	<i>Importance (% ranking)</i>				<i>Instruction (% ranking)</i>			
	<i>1 or 2 (Low)</i>	<i>3 or 4 (Medium)</i>	<i>5 or 6 (High)</i>	<i>M (SD)</i>	<i>1 or 2 (Never)</i>	<i>3 or 4 (Sometimes)</i>	<i>5 or 6 (Often)</i>	<i>M (SD)</i>
<i>Choice making</i>								
Elementary	0.00	18.75	81.25	5.18 (0.86)	2.75	35.78	61.47	4.69 (1.21)
Secondary	1.85	18.52	79.63	5.18 (1.00)	7.41	45.37	47.22	4.31 (1.33)
<i>Decision making</i>								
Elementary	4.59	21.10	74.31	4.99 (1.20)	19.27	40.37	40.37	3.94 (1.48)
Secondary	0.94	9.43	89.62	5.34 (0.91)	14.15	33.96	51.89	4.29 (1.48)
<i>Problem solving</i>								
Elementary	0.00	9.82	90.18	5.52 (0.70)	0.90	29.73	69.37	4.92 (1.01)
Secondary	0.94	13.21	85.85	5.36 (0.90)	7.62	30.48	61.90	4.63 (1.30)
<i>Goal setting and attainment</i>								
Elementary	6.36	23.64	70.00	4.88 (1.19)	21.82	46.36	31.82	3.70 (1.39)
Secondary	3.70	17.59	78.70	5.07 (1.12)	24.07	38.89	37.04	3.82 (1.55)
<i>Self-advocacy and leadership</i>								
Elementary	0.89	24.11	75.00	5.14 (1.06)	13.39	42.86	43.75	4.12 (1.40)
Secondary	3.70	16.67	79.63	5.11 (1.11)	18.52	34.26	47.22	4.18 (1.53)
<i>Self-management and self-regulation</i>								
Elementary	5.36	20.54	74.11	5.04 (1.25)	15.18	36.61	48.21	4.17 (1.49)
Secondary	2.78	23.15	74.07	5.04 (1.03)	17.59	37.96	44.44	4.16 (1.45)
<i>Self-awareness and self-knowledge</i>								
Elementary	2.68	17.86	79.46	5.13 (0.99)	9.82	44.64	45.54	4.21 (1.31)
Secondary	0.93	18.52	80.56	5.17 (0.90)	15.74	34.26	50.00	4.23 (1.51)

Note. Percentages are based on the number of participants who completed the given item. Elementary and secondary refer to the school level in which paraprofessionals worked; combined refers to all paraprofessionals in the study.

other domains, with no significant differences between these two mean values. There were no significant differences in the ratings of instructional frequency for the other domains, with the exception of goal setting and attainment, which was taught less frequently than decision-making skills.

WHAT IS THE RELATION BETWEEN RATINGS OF IMPORTANCE AND SKILL INSTRUCTION?

Significant positive correlations were found for all seven items: choice-making ($r = .53, p < .001$), decision making ($r = .47, p < .0001$), problem solving ($r = .56, p < .0001$), goal setting and

attainment ($r = .47, p < .0001$), self-advocacy and leadership skills ($r = .51, p < .0001$), self-management and self-regulation skills ($r = .55, p < .0001$), and self-awareness and self-knowledge ($r = .49, p < .0001$). Correlation coefficients suggest medium relations between ratings of importance and frequency of instruction.

TO WHAT EXTENT DO PARAPROFESSIONAL CHARACTERISTICS PREDICT RATINGS OF IMPORTANCE OR REPORTS OF SKILL INSTRUCTION?

Only two variables—familiarity with the broader self-determination construct and opportunities to

participate in professional development activities related to self-determination—were statistically significant predictors of importance ratings. Familiarity accounted for 12% of variance in importance, $F(1, 184) = 25.88, p < .0001$, and professional development addressing self-determination skills accounted for an additional 3% of the variance, $F(1, 184) = 7.10, p = .008$. Paraprofessionals with greater familiarity or more prior opportunities to participate in professional development addressing self-determined behaviors placed greater importance on self-determination skills for the students with whom they worked.

When predicting the frequency with which self-determination skills were taught, the same two variables (i.e., familiarity with the construct and opportunities to participate in professional development activities related to self-determination) entered the second model. Familiarity accounted for 13% of variance in the frequency of instruction, $F(1, 184) = 18.18, p < .0001$, and professional development addressing self-determination skills accounted for an additional 3% of the variance, $F(1, 184) = 7.71, p = .006$. Again, paraprofessionals with greater familiarity or more prior opportunities to participate in professional development addressing self-determined behaviors reported spending more time teaching self-determined behaviors to the students with whom they worked. The other variables (i.e., school level, work setting, gender, years of experience, educational attainment) were not predictive of either the importance or instructional frequency ratings.

HOW FAMILIAR ARE PARAPROFESSIONALS WITH THE BROADER SELF-DETERMINATION CONSTRUCT?

Paraprofessionals reported that they had some familiarity with the concept of self-determined behavior for students with disabilities ($M = 1.99, SD = 0.63$), with even lower levels of access to professional development opportunities pertaining to self-determined behaviors ($M = 1.74, SD = 0.68$). Results revealed a statistically significant, but low correlation between these two items ($r = .23, p = .007$), indicating a limited relation between familiarity and professional development.

Yet, both variables were predictive of the importance of the construct and instructional time devoted to teaching self-determination skills.

DISCUSSION

Paraprofessionals have assumed an increasingly prominent place in the education of students with disabilities in public schools in the United States. Although their proper roles within the classroom are still being discussed and debated (Giangreco, Broer, & Suter, 2011; McGrath, Johns, & Mathur, 2010), it is instructive to determine how these staff view and are involved in addressing those instructional domains that have been previously prioritized by teachers. This descriptive study provides an initial glimpse into the domain of self-determination and extends the knowledge base in the following ways.

First, the vast majority of paraprofessionals considered each of the seven self-determination skills to represent important learning goals for the students with whom they worked most closely. As school staff members who often spend considerable time working with and getting to know students with disabilities, their insights lend additional weight to recent calls to expand the opportunities students receive in school to become more independent and self-determining (Cobb et al., 2009; Wehmeyer, Palmer, Shogren, Williams, & Soukup, in press). Although we did not ask paraprofessionals whether they primarily provided instructional support in one-to-one or small-group contexts, we anticipated that they might view promoting self-determined behavior as incongruous with the provision of paraprofessional support. Anecdotally, in our own work with schools, we have heard paraprofessionals suggest that promoting student self-determination could render their jobs no longer necessary, an issue they typically frame as a concern. However, the views of paraprofessionals in this survey study largely echoed the instructional priorities of both special and general educators reported in previous studies (Carter et al., 2008; Cho et al., 2011; Stang et al., 2009; Wehmeyer et al., 2000). The degree of support that paraprofessionals reported is somewhat encouraging, as their alignment with what teachers regard as important could presum-

ably influence the extent to which students are encouraged to develop and/or practice these seven self-determination skills. Indeed, we documented strong positive correlations between ratings of skill importance and skill instruction.

Given the absence of accompanying qualitative interviews, we do not know the primary reasons these paraprofessionals affirm the overall importance of self-determination as an instructional domain or why some individual skill areas (e.g., problem-solving skills, choice-making skills) were perceived to be more important than others (e.g., self-management and self-regulation). Do these reflect the specific priorities articulated by their supervising teachers? Do they reflect the actual educational goals of the students with whom these paraprofessionals worked—either written in individualized education programs or reflected in grade-level standards? Or are the views of paraprofessionals shaped by other factors? Additional research is needed to address these questions and elucidate how decisions about the instructional supports that paraprofessionals provide are ultimately made.

Second, the extent to which paraprofessionals reported teaching each of the seven self-determination skills to the students with whom they worked was fairly moderate, with average ratings all slightly above the midpoint of the scale. In other words, the majority of paraprofessionals reported sometimes or often being involved in teaching each skill. Although some skills (e.g., problem-solving skills, choice-making skills) were reported to have been addressed somewhat more often than others (e.g., goal setting and attainment, decision making), paraprofessionals' reports provide further evidence that self-determination instruction is gaining a noticeable place in the education of students with high-incidence disabilities (Eisenman, 2007; Konrad, Fowler, Walker, Test, & Wood, 2007). Unfortunately, we do not know the specific forms that this instruction took (e.g., curricular programs, discrete instruction, encouraging skill use) or the extent to which highly qualified teachers directed and supervised these efforts. As noted at the outset of this article, although paraprofessionals can provide instrumental instructional supports under the auspices of a general or special educator, they "should not be providing planned direct instruction, or intro-

ducing to students new skills, concepts, or academic content" (U.S. Department of Education 2004, p. 1). Thus, the degree to which these findings are encouraging—or cause for further concern—may lie in whether paraprofessionals ultimately assumed support roles that extended beyond those outlined in federal, state, and district policies.

As with all instruction, however, it is not merely the frequency with which instruction occurs that is important, but also the quality and impact of that instruction. We encourage future researchers to extend this line of inquiry to examine the quality of instruction in self-determination skills in relation to student outcomes (e.g., academic, behavioral, social, etc.). It is not clear from our study how much guidance paraprofessionals actually received when providing said instruction, nor did we evaluate the quality and effectiveness of their instructional practices. Moreover, there are very few published intervention studies in which paraprofessionals have served as interventionists (e.g., Durlak, Rose, & Bursuck, 1994; Lane, Fletcher, Carter, Dejud, & Delorenzo, 2007; Martin et al., 2003). Thus, the field still has little empirical guidance for how best to train and supervise paraprofessionals to support the development of self-determination among the students with whom they work. Additional research is needed that articulates how paraprofessionals might play an effective but appropriately guided role in fostering greater self-determination among the students.

It is not merely the frequency with which instruction occurs that is important, but also the quality and impact of that instruction.

Third, we found higher ratings of importance were strongly and positively associated with reported instructional frequency across all seven self-determination component skills. Although the direction of this relation remains unclear, a number of intriguing possibilities exist. It may be that the importance paraprofessionals place on a domain impacts what they actually address with students, a finding that would be particularly

problematic. Conversely, it may be that providing instructional support related to these skills shapes their perceptions of skill importance. Other factors—such as training, prior experiences, or the general curriculum—could play an influential role. The intersection of personal views and actual practices among paraprofessionals represents a compelling and much needed line of research. Further, the reasons that paraprofessionals were less involved in teaching particular self-determination skills—despite highly valuing those skills—should also be explored.

Fourth, we found that personal demographics (e.g., gender, highest degree) and work contexts (e.g., classroom setting, grade level) were not predictive of the degree to which paraprofessionals prioritized or provided instruction across the seven component elements of self-determination. Given the relatively recent emphasis given to self-determination in the field of special education (Field, Martin, Miller, Ward, & Wehmeyer, 1998), we were somewhat surprised that number of years of experience was not more strongly associated with paraprofessionals' ratings. We were encouraged at the consistency of the frequency and importance ratings, regardless of years of experience. Similarly, we anticipated that paraprofessionals working at the secondary level would focus more attention on these skills than those working with elementary students. Instead, we found that prior training and familiarity with self-determination were the most prominent predictors of the importance ratings or instructional frequency. This bodes well, as both represent malleable factors that could be addressed during initial or ongoing training opportunities provided to paraprofessionals.

LIMITATIONS AND FUTURE RESEARCH

This study focused narrowly on the domain of self-determination operationalized as seven component skills. We did not query paraprofessionals about other aspects of self-determination or related skills that may be associated with self-determination, including social skills (Nota, Ferrari, Soresi, & Wehmeyer, 2007; Pierson, Carter, Lane, & Glaeser, 2008) and transition-related skills (Shogren et al., 2007). We also relied upon self-report of level of disability to categorize those

paraprofessionals who worked with students with high-incidence (vs. low-incidence) disabilities and did not ask with how many different students these staff worked. Demographic information provided by paraprofessionals in this study suggests that many of these paraprofessionals worked with students having a range of disability labels and support needs. Thus, the degree to which their perceptions can be pinpointed to particular students is not possible to discern in this sample.

In addition, the types of prior training and professional development these paraprofessionals received is important to explore in further depth, as this study provides few details about how paraprofessionals were trained. The limited availability of training opportunities for these staff is a recurring concern in the literature (Giangreco, Suter, & Doyle, 2010; Liston, Nevin, & Malian, 2009), despite IDEA's (2004) emphasis that paraprofessionals should be "appropriately trained and supervised" (20 U.S.C. § 1412[a][15][B]).

Still unaddressed is the question of why paraprofessionals consider some skills to be more important than others and how such an understanding might impact the extent or quality with which they provide or support instruction in or opportunities to practice particular skills. Qualitative studies to explore or probe these issues in greater depth are warranted. Also, although schools were randomly selected and all paraprofessionals were invited to participate, we were not able to evaluate whether any differences existed between staff who participated and those who did not choose to participate in our study. In addition, because our sample was drawn from only three large service regions, additional research is needed to determine the extent to which these findings are consistent in other locales. Because districts may differ widely in their policies and practices regarding implementation of paraprofessional supports (Giangreco et al., 2009), it is important to explore whether and how the perspectives of paraprofessionals are shaped by school- and district-level factors.

CONCLUSION

Despite these limitations, we view this study as an important first step in examining paraprofes-

sionals' perspectives on promoting self-determination for students with high-incidence disabilities. Given the importance of improving self-determined behaviors among these students to enhance outcomes within and beyond the school setting, we contend that additional inquiry is needed to further address the questions raised by this study. For now, we are encouraged by the high levels of importance paraprofessionals attributed to each of the seven component elements of self-determination. We hope that future efforts will focus on the ways in which paraprofessionals might effectively and appropriately support the self-determination development of the students with whom they work.

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