Self-Determination and Student Involvement in Functional Assessment:

Innovative Practices

❧

Michael L. Wehmeyer
University of Kansas

Daniel J. Baker
Oregon Rehabilitation Association

Richard Blumberg
The Elizabeth M. Boggs Center on Developmental Disabilities

Richard Harrison
University of Kansas

Abstract: The fundamental feature that distinguishes positive behavior support (PBS) from previous generations of applied behavior analysis is its focus on the remediation of deficient contexts that are determined to be the source of the problem. Determining this source involves conducting a functional assessment. This innovative practices article presents the argument that if professionals are to successfully address issues pertaining to the context of problem behaviors, they must incorporate the perspectives and knowledge of people receiving behavioral supports into the functional assessment process. The authors report the results of a pilot examination of a person-guided functional assessment and present ideas for enhancing consumer involvement in the functional assessment process.

Promoting and enhancing the self-determination of people with disabilities has become an important focus of disability services and supports across the life span (Wehmeyer, 2001). A growing international literature base has documented that people with mental retardation or developmental disabilities in particular are not very self-determined (Robertson et al., 2001; Stancliffe, 1997; Stancliffe & Abery, 1997; Stancliffe, Abery, & Smith, 2001; Stancliffe & Wehmeyer, 1995; Wehmeyer, 2001; Wehmeyer, Kelchner, & Richards, 1996; Wehmeyer & Metzler, 1995).

When examining the degree to which someone is self-determined, one should consider two primary contributors: the capacity of the person to act in a self-determined manner and the degree to which the environment in which the persons lives, learns, works and plays provides opportunities for him or her to make choices and exert control over his or her life. Related to this second aspect is the degree to which other people enable and support the person in exerting control or the degree to which other supports, such as assistive technology, are in place to maximize the person's efforts to become more self-determined.

The fundamental feature distinguishing positive behavior support (PBS) from previous generations of applied behavior analysis are described by Carr et al. (2000) as follows:

PBS is an approach for dealing with problem behavior that focuses on the remediation of deficient contexts (i.e., environmental conditions and/or behavioral repertoires) that by functional assessment are documented to be the source of the problem. (p.1)

By addressing the context in which problem behaviors occur, PBS attempts to address complex behaviors in socially valid (and valued) settings. This in turn aligns PBS with emerging values in the field of mental retardation and developmental disabilities for the provision of supports instead of programs and for emphasizing personal outcomes, such as improved quality of life, as indicators of intervention success.

This value of designing supports that result in positive life outcomes by addressing deficient contexts (environmental conditions or behavioral repertoires) provides an entry point for considering issues pertaining to self-determination as both a factor contributing to problem behavior and an outcome of positive behavior interventions. There is more than sufficient evidence, for example, that providing opportunities for people with problem behaviors to make choices results in reductions in those behaviors. Dunlap et al. (1994) summarized the research on choice-making as a management strategy. These researchers concluded that making choices can lead

to enhanced and more adaptive forms of responding, including improved social behavior and task performance, and can help reduce problem behaviors. Munk and Repp (1994) identified allowing students to choose tasks as an instructional variable that served as a nonaversive intervention for problem behaviors.

As such, it seems logical that promoting self-determination, either by creating greater opportunities for persons to exert control over their lives or by teaching people more effective skills with which they could solve problems, set goals, or participate in decisions, would be a beneficial positive behavior intervention. Similarly, if one addresses deficient contexts to provide greater choice opportunities, one might assume that an outcome of such interventions would be enhanced self-determination.

Promoting self-determination as a means to address deficient contexts, however, must go beyond simply having another person engineer the environment to provide more choice opportunities or teaching someone skills leading to enhanced self-determination skills. There is both a bias and an ethical obligation in promoting self-determination to enable persons to do for themselves as much as they can and to minimize the amount and intensity of "other-determined" or other-directed supports. In other areas in special education in which there have been ongoing efforts to promote self-determinations, active involvement in planning and decision-making by the person for whom supports are being designed is a critical feature. To do so within the context of PBS, there needs to be similar efforts to promote self-directed planning that leads to self-regulated or self-managed interventions.

Although considerable emphasis in the functional assessment process has been placed on obtaining information from the person exhibiting the problem behavior, such "involvement" is often too passive, and much of the functional assessment process remains other-directed. This process is, however, fundamentally nothing more or less than a problem-solving process, and recent work in special education has shown that students with disabilities can become more effective self-regulated problem-solvers and, in turn, retain greater control over the educational decision-making process (Agran, Blanchard, & Wehmeyer, 2000; Wehmeyer, Palmer, Agran, Mithaug, & Martin, 2000).

The strategies and techniques applied to promote self-regulated problem-solving skills and self-determination of students with disabilities within the context of educational decision-making may also be applied to the functional assessment process. In a first step demonstrating this, Reed, Thomas, Sprague, and Horner (1997) developed and studied the use of a student-guided functional assessment, and they examined the percentage of agreement between students and teachers. In that study, students (primarily with behavioral or emotional disorders) who had a history of being referred to the school office for problem behaviors, and teachers who worked with those students, were interviewed using the student-guided functional assessment interview process (see Reed et al., 1997). Responses from the student and teacher were analyzed for agreement. There were high percentages of agreement between teachers and students on identifying problem behaviors (85.1%), predictor variables (77%), and consequences (77%). The agreement rate for setting events, however, was relatively low (26%), which Reed and colleagues attributed to low teacher awareness of behavior outside the classroom setting. Reed et al. also noted that students identified a larger variety of behaviors than did teachers.

The student-guided functional assessment developed and evaluated by Reed et al. (1997) provided an innovative and useful example for promoting greater student involvement in the planning and decision-making processes pertaining to problem behaviors. We were interested in exploring whether a process similar to that developed by Reed and colleagues might be useful with students with cognitive, communicative, or other disabilities. This innovative practices article is intended to introduce the concept of value to self-directed and self-guided components of functional assessment. In essence, we report on a pilot test of a person-guided functional assessment process used with students with disabilities. To do so, we created a person-guided functional assessment tool and conducted a pilot examination of the potential for that process to provide greater student involvement in functional assessment.

Method

PARTICIPANTS

Ten students receiving special education services who had been identified by school personnel as potentially benefiting from a functional assessment were recruited to participate in the study. Nine of the 10 students were boys who ranged in age from 6 years to 12 years ($M = 9.9$ years, $SD = 1.79$) and were in Grades 1 through 6. Two students had a primary diagnosis of mental retardation (one student also with a secondary diagnosis of behavior disorder), six students had a primary diagnosis of behavior disorder (one student had a secondary diagnosis of autism and another student had a secondary diagnosis of a learning disability), two students had a primary diagnosis of autism (one student had a secondary diagnosis of a learning disability), and one student had a primary diagnosis of a learning disability. All of the students had adequate verbal skills to participate in the interview, although two students spoke primarily in two- to three-word phrases.

Adult participants consisted of 14 school staff members: 4 school psychologists, 2 social workers, 2 general educators, 5 special educators, and 1 special education paraprofessional. At least 1 educational professional was interviewed for each student, but when

possible, multiple staff members were interviewed and their results combined. All of the school staff members knew the student on whom they were reporting information and had worked with that student on an ongoing basis. All students and school personnel were interviewed at the elementary school by the fourth author. All interviews took place outside the student's classroom.

PROCEDURE

Each student was referred to the researcher by a school staff member because of the need for a functional behavior assessment. Informed consent was obtained for all participants. Interviews with school staff members lasted anywhere from 1 hour to 2 hours. Each student was also asked if he or she would help the researcher with some questions about school. The student was informed that answering the questions would take about 1 hour. These student interviews took 1 hour, except for one interview that lasted about 20 minutes (this student requested to end the interview because he did not want tot talk about home or school anymore).

School staff members were interviewed using the *Functional Assessment Interview* (FAI; O'Neill et al., 1997). For students, a person-guided functional assessment (PGFA) was used. The latter assessment tool was adapted for each student as necessary, based on cognitive or verbal abilities. For example, the first question asked, "Is getting up in the morning: a big problem, sometimes a problem, or never a problem?" For some students, the question was posed by asking if the student liked to get up in the morning. If that student responded "no," the interviewer would then ask if getting up was just sometimes a problem or always a big problem. If the student said that getting up was not a problem or that he or she liked getting up, the interviewer went on to the next question.

INSTRUMENTATION
Functional Assessment Interview
The FAI is a widely used assessment tool that probes a variety of areas related to the occurrence of problem behavior, including common setting events, antecedents, and the functions of the behavior. It also leads the user(s) in operationally defining the behavior. The FAI considers both social (e.g., care providers, staffing patterns) and nonsocial (e.g., illness) variables and examines the individual's skill repertoire and preferences as well as problem behaviors. The FAI is intended to be completed by individuals knowledgeable in the behavior patterns of the focus person.

Person-Guided Functional Assessment
The impetus for the development of the PGFA arose from the authors' work with individuals with severe cognitive disabilities. Our efforts to promote the self-determination of people with disabilities led us to consider ways that we

could assist these individuals in participating meaningfully in the identification of problem behaviors, setting events, antecedents, and consequences. Our clinical work had informed us that many functional assessment tools, although very useful, were often too other-directed to obtain functional assessment information from the perspective of a person with a disability. Significant limitations to the use of such tools were the clinical language and terms used and the open-ended nature of many of the interview items. For these reasons, we attempted to combine the use of person-first language with visual icons to make the PGFA more accessible to people with disabilities.

Our experience suggested that activity settings and daily routines are logical units for a collaborative analysis of problem behavior. A recent observational research study of the activity settings and problem behaviors of 10 families of children with developmental disabilities indicated that the children engaged in problem behaviors for a specific purpose (function), which was directly related to the goals and structures of typical routines (Lucyshyn, Blumberg, & Irvin, 2001). We developed the PGFA based on (a) analysis of typical daily routines and activities suggested by our clinical experience and (b) suggestions of colleagues and service providers in the field of developmental disabilities.

The PGFA consists of three sections. The first section is a 23-item interview format that asks interviewees to evaluate 20 specific daily routines/activities by indicating whether these are a big problem, sometimes a problem, or never a problem. These routines/activities are listed in Table 1. Each of these options is illustrated by an image of a person smiling (never a problem); looking serious, though not frowning (sometimes a problem); and frowning (a big problem). The interviewer then asked the respondent to think of up to three additional routines or activities that had the potential to be problems and to evaluate them in the same way. For each item, the respondent answered "big problem" or "sometimes a problem" (for the 20 specific items in Table 1 and the self-generated items). Accompanying probe questions ask, "What happens?" "What do you do?" What happens next?" In this manner, information that identifies specific problem behaviors, antecedent events, and consequences is collected. These activity- or routine-based questions are followed by five interview questions that collect information about potential setting events, such as sleep problems, illness, boredom, problems with anger, and communication problems. These items are presented in Table 2.

ANALYSIS

The information collected from the FAI and the PGFA was categorized by the authors into setting events (identified in this circumstance as a routine or activity that

increases the probability of occurrence of any behavior), antecedents (a stimulus that predictably evokes a problem behavior), problem behavior, and consequences. Setting events were identified from the open-ended responses to the questions in Table 2. Antecedents were identified from the "What happens?" column for responses to activities and routines listed in Table 1, whereas problem behaviors were identified from the "What did you do?" section of each item and consequences were identified from the "What happened next?" column. We then listed unique responses in each category for the student and the adult(s) reporting about that student and calculated the mean frequency of responses for student or adult responses in each category. Coding was conducted by two of the authors, and we required these two coders to come to consensus on each coded item. We then calculated two percentages: the percentage of student responses that matched a response on the adult interview and the percentage of adult responses that matched a response on the student interview.

Results

Figure 1 depicts the mean frequency of responses for students and for adults by category. The mean number of problem behaviors identified was identical (2.8) for student reports and adult reports. Students and adults had similar mean frequencies of reports for setting events (student = 3.2, adult = 2.6) and for consequences (student = 2.4, adult = 1.9). There was, however, a large difference between the mean frequency of antecedents reported by the students (M=6.4) versus that reported by adults (M = 1.8)

Figure 2 depicts the percentage of agreement for each category by the respondents. These percentages provide different pieces of information, assuming that the adults' responses are the "standard" by which to judge the reliability or the utility of the students' responses. That is, if we assume that the adults are reliable reporters, which we believe we can (e.g., Baker, Reichle, & Boyer, 1997), then a high percentage of adult responses that also appear on the student report would indicate that the students provided reasonably valid responses. The highest agreement was for the consequences category, where 73% of the consequences identified by the adults were also identified by students, followed by 68% for the problem behaviors category, and 60% for the antecedents category. Only 38% of the adult responses in the setting events category also appeared on the student reports, however.

In addition, the percentage of student responses that also appeared on the adult interview might serve as an indicator of unique student contributions to the functional assessment process, depending on the frequency and the percentage of adults' responses that appeared on the students' reports. Examining this in the category of problem behaviors showed that 72% of the responses provided by the

Table 1. Items on the Person-Guided Functional Assessment

Item no.	Item
1	Getting up in the morning
2	Mealtimes
3	Going to work/school
4	Doing things in the community
5	Being at work/school
6	People telling you what to do
7	People telling you "no"
8	Saying "no" to other people
9	People touching you
10	People being close to you
11	Being bored
12	Being around people you don't like
13	Being asked to do something difficult
14	Having to wait for something you want
15	Being told to hurry up
16	Bedtime
17	Touching other people
18	Taking medication/medical treatments
19	Hygiene tasks (e.g., bathing, brushing teeth)
20	Moving from one activity to another

Table 2. Interview Questions From the Person-Guided Functional Assessment

Question	What happens?
When you have trouble sleeping, is it easier for you to get mad about things?	
When you are sick, is it easier for you to get mad about things?	
When you are bored, is it easier for you to get mad about things?	
If you are mad at somebody else, is it easier for you to get mad about things?	
If you have trouble talking to people and making them understand you, is it easier for you to get mad about things?	

students also appeared in the adults' responses. In the consequences category, it was 52%, followed by 23% in the setting events category and 16% in the antecedents category. We discuss our interpretation of these findings in the following section.

Discussion

An examination of the findings illustrated in Figures 1 and 2 shows very close agreement between the students and the adults on identifying problem behaviors. Both groups identi-
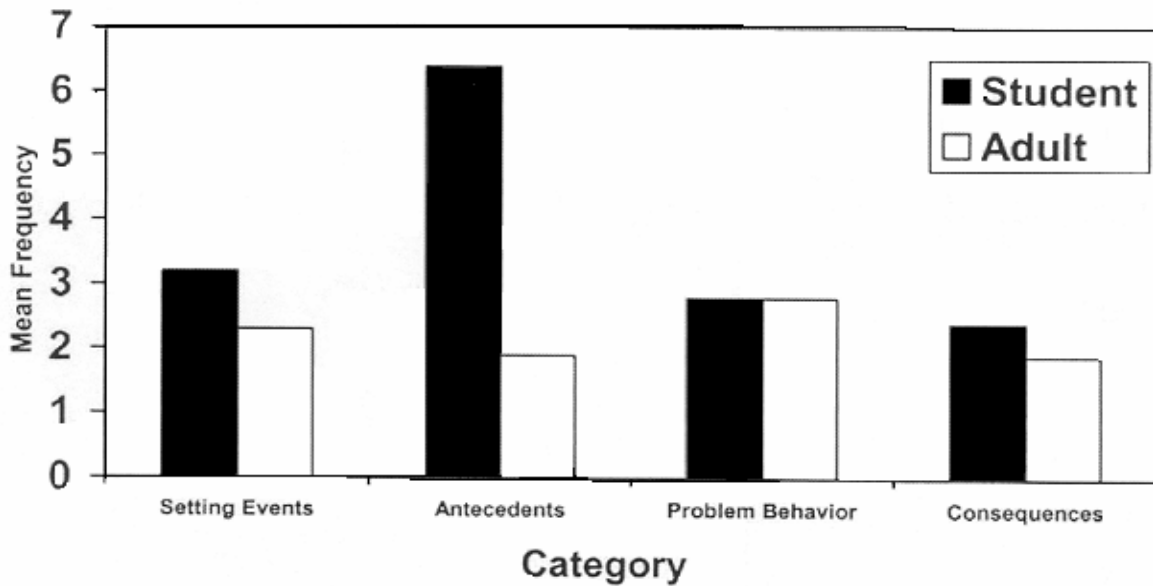
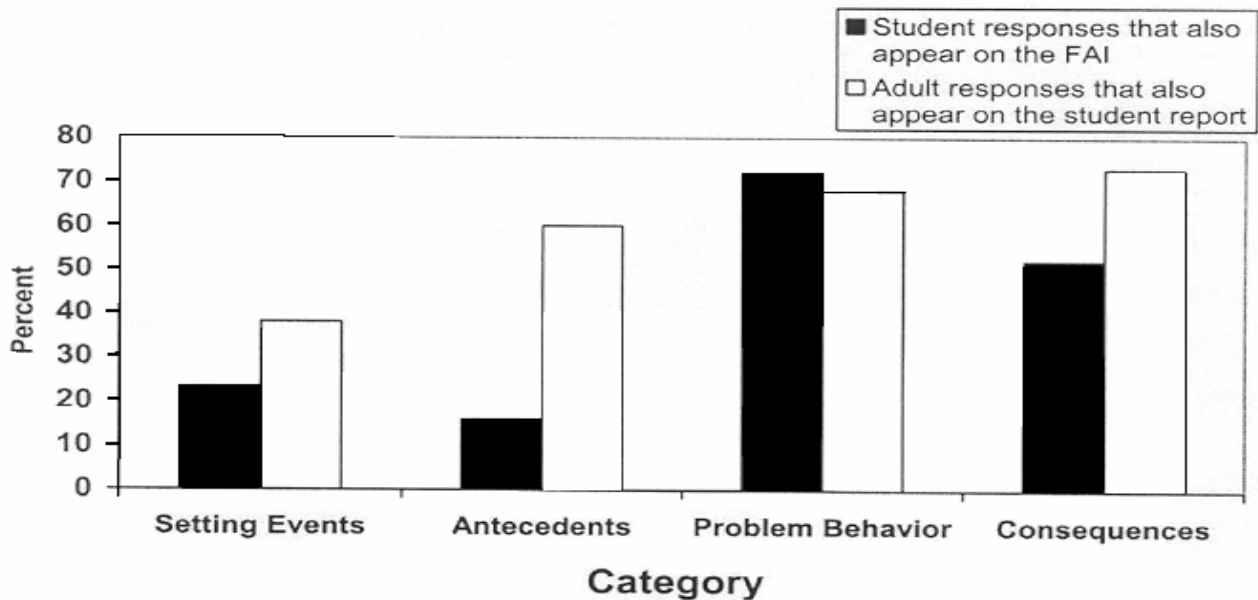Figure 1. Mean frequency of student and adult reports by category.

Figure 2. Percentage of agreement by category and adult/student status. *Note.* FAI = *Functional Assessment Interview* (O'Neill et al., 1997).

fied exactly the same mean frequency of problem behaviors (2.8), and there were high levels of adult-reported factors that appeared in the student interviews (68%) and high levels of student-reported factors that appeared in the adult interviews (72%). Essentially, the students seemed able to identify the same problem behaviors that the adults were able to identify, with each group also identifying about 30%

unique problem behaviors (e.g., problem behaviors identified by one group but not the other). The mean frequencies of consequences identified by students and adults were also similar, and there was a high percentage (73%) of adult-reported factors that also appeared on the student interview, whereas 52% of the consequences identified by the students were on the adult

forms. Thus, 48% of student-identified consequences were not reported by the adults, and 27% of adult-identified consequences were not identified by the students. Given that the students, on average, identified slightly more responses, one can hypothesize that they were accurate in identifying the consequences that adults identified and were also able to generate additional consequences not identified by the adults.

The remaining two categories are more complex to interpret. Similar mean frequencies of setting events were identified by the students and the adults, with the former identifying a few more. Despite these similarities, however, only 38% of the adult responses appeared in the students' reports, and only 23% of the student responses also appeared in the adults' reports. Thus, a large number of setting events identified by each group were not identified by the other group (77% of student responses were not found in the adult responses, and 62% of the adult responses were not on the student surveys). As discussed in the introduction to this article, the category for which there was the lowest agreement between student and adult respondents in the Reed et al. (1997) study was setting events. These authors attributed this, at least partially, to a lack of knowledge on the part of the adults about all aspects of the students' life. This is also a possible explanation in our study, although it appeared to be not so much knowledge about the students' life circumstances as it was knowledge of (or, perhaps, acknowledgement of) students' emotional states. Adults tended to use objective indicators as setting events (e.g., mental illness, history of abuse, illness, nutrition problems), whereas the students tended toward subjective indicators (e.g., people not understanding them; when they are angry, frustrated, or bored; when they are anxious; when they are fatigues). In fact, it is quite possible that students and adults are using different perspectives to report on similar setting events, with the adults describing more objective causes of behavior (e.g., illness, history of abuse) and the students reporting their subjective experiences of the same issues (e.g., fatigue, anxiety).

In the final category, antecedents, there was a considerable difference in the mean frequencies of antecedent events identified by the students (6.4 per student) versus the adults (1.9 per adult). Students generated—both on average and consistently across students—more antecedents than did the adults. Moreover, although a relatively large number of the antecedents identified by the adults were also identified by students (60%), only 16% of the responses identified by the students also appeared in the adults' responses. We believe this indicates that the students were fairly successful at identifying the antecedents that adults would identify but also were able to generate many more unique antecedents not provided by an external evaluator. Many of these related to the fact that students ob-

viously know more about their entire day than do adults in the education system. The students were more likely to identify antecedents occurring during the total day (e.g., getting up in the morning, sharing family meals, interacting with neighborhood peers), whereas the adults mainly identified school-based antecedents (e.g., doing seat work, interacting with school peers). That said, the majority of the student-identified antecedents were school-based as well, but they reflected a greater variety of factors, often pertaining to the student's perspective (e.g., bored at school, doesn't like being touched, doesn't like being told "no," other students sitting nearby). Overall, adult-identified antecedents related to school tended to be global (e.g., hates being at school, finds work to be difficult).

A number of limitations to this pilot study preclude making generalizations about student involvement in functional assessment or the data themselves. We made no effort to collect information about whether the problem behaviors identified by the students or the adults actually occurred, how often they occurred, when they were performed, and so forth. Clearly, just because students or others report something as a problem does not necessarily make it so. This is the case even when the students and the adults agreed on the problem. There is a need for research related to self-guided functional assessment processes that evaluates issues of validity with regard to self-reports and reports by others.

Second, there are limitations to comparing student responses from the PGFA with other responses from the FAI. Our intent was to use the FAI as a standard by which we would determine, to some degree, the validity of self-reports. As mentioned previously, because we did not collect data about the validity of the self-report or other report, we cannot state unequivocally that either indicator was valid or that these instruments were, in essence, measuring the same things and thus were comparable. That said, we have no reason to believe that the FAI, as used here, was not as reliable and valid, because it has been used extensively in the field and, as such, would suggest that we can use it as a standard with which to interpret findings from the PGFA. Differences between the two indicators cannot, however, be used in any manner to judge the FAI or to suggest that the PGFA is more effective. We were simply using the FAI to obtain some indication of the potential viability of a self-report indicator.

Third, the coding of responses from the measures to the four categories was done by consensus, but we did not measure interrater reliability. Had we done so, we could be more certain that our assignment of an item as representing either a setting event or an antecedent was more reliable. As such, we should acknowledge that the difference be-

tween a setting event and an antecedent in this study probably is too reliant on our judgment, and there may have been some error due to that coding process.

Despite the pilot nature of this report, we believe that there is considerable merit, indeed importance, to moving toward functional assessment procedures that include the student or the person exhibiting problem behavior as a partner in that process. The implementation of self-guided functional assessment activities will undoubtedly present challenges to existing support systems and mechanisms. Some care providers may question this, noting that the mere presence of a problem behavior may preclude asking the individual what he or she wants with regard to behavior support. However, given that supports, by definition, must embody aspects of personal preferences, it is not only important that the field begins to move in this direction, but in fact necessary. Moreover, it seems quite likely that the diagnostic picture being drawn by the functional assessment process is incomplete without input from students. In fact, the design and implementation of a person-guided tool, such as that used in this study, is only one step toward meaningful control over the support process by people with disabilities. In subsequent efforts it will be important to examine more closely how individuals with challenging behaviors can assume greater responsibility for planning and decision-making, thus becoming causal agents in their own lives. Such efforts will have the reciprocal benefit of promoting and enhancing self-determination, which will, in turn, provide greater capacity for people to exert control over their behavioral support programs.

ABOUT THE AUTHORS

Michael L. Wehmeyer, PhD, is an associate professor in the Department of Special Education, director of the Kansas University Center on Developmental Disabilities, and associate director of the Beach Center on Disability, all at the University of Kansas. **Daniel J. Baker,** *PhD, is a professional development specialist and training coordinator at the Oregon Rehabilitation Association.* **Richard Blumberg,** *PhD, is an instructor of pediatrics and training director at the Elizabeth M. Boggs Center on Developmental Disabilities.* **Richard Harrison** *is a doctoral student in the Department of Special Education at the University of Kansas. Address: Michael L. Wehmeyer, Beach Center on Disability, 1200 Sunnyside Avenue, Room 3136, Lawrence, KS 66045.*

REFERENCES

Agran, M., Blanchard, C., & Wehmeyer, M. L. (2000). Promoting transition goals and self-determination through student-directed learning: The Self-Determined Learning Model of Instruction.

Education and Training in Mental Retardation and Developmental Disabilities, 35, 351-364.

Baker, D. J., Reichle, J., & Boyer, A. (1997). Communicative agreement between spoken utterances and actions among persons with mild-to-moderate mental retardation. *Education and Training in Mental Retardation and Developmental Disabilities, 32,* 49-58.

Carr, E. G., Horner, R. H., Turnbull, A. P., Marquis, J. G., McLaughlin, D. M., McAtee, M. L., et al. (2000). *Positive behavior support for people with developmental disabilities: A research synthesis.* Washington, D.C.: American Association on Mental Retardation.

Dunlap, G., DePerczel, M., Clarke, S., Wilson, D., Wright, S., White, R., et al. (1994). Choice making to promote adaptive behavior for students with emotional and behavioral challenges. *Journal of Applied Behavior Analysis, 27,* 505-518.

Lucyshyn, J. M., Blumberg, E. R., & Irvin, L. K. (2001). *Transforming coercive relationships in family routines.* Public Health Service Grants. Washington, DC: National Institutes of Health, National Institute of Child Health and Human Development.

Munk, D. D., & Repp, A. C. (1994). The relationship between instructional variables and problem behavior: A review. *Exceptional Children, 60,* 390-401.

O'Neill, R. E., Horner, R. H., Albin, R. W., Sprague, J. R., Storey, K., & Newton, J. S. (1997). *Functional assessment and program development for problem behavior: A practical handbook* (2nd ed.). Pacific Grove, CA: Brooks/Cole.

Reed, H., Thomas, E., Sprague, J. R., & Horner, R. H. (1997). The Student-Guided Functional Assessment Interview: An analysis of student and teacher agreement. *Journal of Behavioral Education, 7,* 33-49.

Robertson, J., Emerson, E., Hatton, C., Gregory, N., Kessissoglou, S., Hallam, A., et al. (2001). Environmental opportunities and supports for exercising self-determination in community-based residential settings. *Research in Developmental Disabilities, 22,* 487-502.

Stancliffe, R. (1997). Community living-unit size, staff presence, and residents' choice-making. *Mental Retardation, 35,* 1-9.

Stancliffe, R., & Abery, B. (1997). Longitudinal study of deinstitutionalization and the exercise of choice. *Mental Retardation, 35,* 159-169.

Stancliffe, R., Abery, B., & Smith, J. (2000). Personal control and the ecology of community living settings: Beyond living-unit size and type. *Mental Retardation, 105,* 431-454.

Stancliffe, R., & Wehmeyer, M. L. (1995). Variability in the availability of choice to adults with mental retardation. *The Journal of Vocational Rehabilitation, 5,* 319-328.

Wehmeyer, M. L. (2001). Self-determination and mental retardation. In L. M. Glidden (Ed.), *International review of research on mental retardation* (Vol. 24, pp. 1-48). New York: Academic Press.

Wehmeyer, M. L., Kelchner, K., & Richards, S. (1996). Essential characteristics of self-determined behaviors of adults with mental retardation and developmental disabilities. *American Journal on Mental Retardation, 100,* 632-642.

Wehmeyer, M. L., & Metzler, C.A. (1995). How self-determined are people with mental retardation? The National Consumer Survey. *Mental Retardation, 33,* 111-119.

Wehmeyer, M. L., Palmer, S., Agran, M., Mithaug, D., & Martin J. (2000). Promoting causal agency: The Self-Determined Learning Model of Instruction. *Exceptional Children, 66,* 439-453.

Action Editor: Edward G. Carr