Occupation-Centered Assessment of Children

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The past 5 years have seen increasing calls to reexamine our assessment and intervention practices to ensure that they reflect the profession's basic focus on occupation. Although a number of noteworthy efforts in this direction have been presented for adult practice areas, implementation of occupation-centered assessment in pediatrics has been hampered by the lack of a consistent framework to guide this process.

This article will present an adaptation of the functional assessment model proposed by Trombly (1993) designed to better reflect the unique needs and situations of children. It is a multilevel model that examines the pattern of a child's occupations in a particular environment as well as the performance of important tasks and activities that are part of these occupations. It is proposed that this model can serve as an organizing framework for an occupation-centered assessment process by helping to identify the critical questions that need to be addressed at each level of analysis and the kinds of measures that might be used to obtain relevant information. The newly completed School Function Assessment will be used to illustrate application of the framework to examine occupational performance of children in elementary school.

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The basic concepts of a profession should be reflected through the tests and measurements used in its practice. (Gillette, 1991, p. 565)

n 1991, the Symposium on Measurement and Assessment: Directions for the Future in Occupational Therapy was held in Chicago and sponsored jointly by the American Occupational Therapy Foundation, the American Occupational Therapy Association (AOTA), and the Center for Research and Measurement at the University of Illinois at Chicago. This landmark meeting of occupational therapy researchers and scholars generated a series of articles and recommendations for future directions in the field that were published in The American Journal of Occupational Therapy (AJOT) in March and April of 1993. Collectively, these articles called for a reexamination of the extent to which our assessment processes and instruments are, or are not, congruent with the basic focus of our profession on occupation and our philosophy of individualized and holistic intervention (Fisher & Short-DeGraff, 1993).

Trombly (1993), among others, articulated a concern that too often our standard approach to assessment does not convey adequately to our clients either the importance or the relevance of what we do. She described this typical approach as "bottom-up," meaning that the primary target of assessment is the level of discrete component abilities that the therapist anticipates may be affected by the client's identified condition. The potential functional impact of these component deficits may be inferred but is often not assessed directly or in as great depth. As a consequence, the link between deficits in basic abilities and the functional problems the client experiences in daily life may never become clear to him or her, which, in turn, may raise doubts about the meaningfulness of the intervention. As Mathiowetz (1993) pointed out, a further problem is that the assumptions underlying this bottom-up approach to assessment and intervention have been challenged strongly by recent research, especially the expectation that normalizing performance components will necessarily result in independence in occupational performance.

The alternative recommended by the symposium group is to adopt a top-down assessment process in occupational therapy (Fisher & Short-DeGraff, 1993). This top-down approach begins by gathering information about what the person needs or wants to do, the

Author's Note: In this paper, I use the term assessment to refer to the process of information gathering to better understand a given child. When a specific instrument is being referred to, I use the term assessment instrument, assessment tool, or measure.

context in which he or she typically engages in these valued occupations, and current limitations fulfilling these personal expectations. This approach includes identifying both the critical roles the person needs or wishes to fulfill and the particular tasks and contexts that define the expectations of these roles for that person. More discrete abilities (i.e., performance components) are assessed only to the extent that is needed to help clarify the possible sources of observed limitations in important daily tasks and to help determine the most viable option for overcoming these functional limitations.

It is argued that the top-down approach to information gathering will result in improved communication about the nature of occupational therapy as well as assessment results that better support truly occupationcentered intervention (Fisher & Short-DeGraff, 1993). However, the ability to implement this approach critically depends on the availability of assessment tools that are congruent with an occupation focus, consider the person in context, and are psychometrically sound. Several articles in the two special issues of AJOT devoted to functional assessment examined assessment instruments and issues that pertain to adults (e.g., Law, 1993; Mathiowetz, 1993; Velozo, 1993). However, only two articles directed their attention to children (Bundy, 1993; Miller & Roid, 1993), and none directly took up the unique issues that pertain to the assessment of children. For example, how should a client-centered approach be implemented when the client of focus is a child? One method is to take the family members or caregivers as the focus; however, at what age should the child himself or herself begin to have some autonomy in defining needs and goals, especially in a context such as school where the family is not present? As developing persons, children, far more than adults, are measured against age-based expectations and standards. The impact of these assessments can be far ranging, from determining critical features of the child's daily environment (e.g., school placement decisions) to eligibility for services such as occupational therapy. Increasingly, occupational therapy services for children are provided in the context of school and, thus, are determined by educational rather than medical policies. Is it possible to create assessment tools that address these unique features of pediatric practice while remaining true to our professional focus on occupation?

As is clear from Trombly's (1993) discussion, implementation of an occupation-centered assessment process requires more than adding on another instrument (e.g., an activities of daily living [ADL] questionnaire) to an existing battery. Shifting to occupation-centered assessment requires adoption of a different framework altogether, one organized around our understanding of occupation. This shift in framework also requires that we clarify the

distinction between the terms function and occup. The term function is often applied quite narrowly in bilitation so that it encompasses only the most basic actions or activities, for example, the standard set of (eating, dressing, bathing, grooming, toileting) and ple physical actions (reaching, sitting, standing, wall Unfortunately, this narrow use of the term may m some to believe that what is in reality only a cursory (ation of the person's needs and occupational perforn has addressed the demand for more "functional" ev tion (Jette, 1995). Similarly, incorporation of a "real ject into an exercise program does not automatically the intervention more functional and more relevant for particular client's occupational performance (Ne 1988; Trombly 1995). Bits and pieces of function d make an occupation-centered assessment and interve process.

A broader perspective that recognizes not onl "doing" component denoted by function, but also social, symbolic, spiritual, and temporal elements en passed by occupation has been articulated in a numb places in our literature (e.g., AOTA, 1995; Christia 1991; Clark et al., 1991). However, the instantiation this framework in actual assessment practices and has been slow. Adult clinical practice has a numb examples of systematic efforts to develop new measure such as the Canadian Occupational Performance Me (Law et al., 1991), the Assessment of Motor and Pt Skills (Fisher, 1993), the Occupational Performance tory Interview (Kielhofner, Henry, & Whalens, 19 and discussions of the application of ethnographic (§ cer, Krefting, & Mattingly, 1993) and narrative (C Ennevor, & Richardson, 1996) methods, for inform gathering and goal setting. To date, pediatrics has few examples of or proposals for systematic occupa centered assessment approaches (although see M: Tirrul-Jones, & Magill-Evans, 1990). One reason for discrepancy between adult and pediatric practice ma that the methods proposed for client-centered assessi of adults are not readily applied with children. As r. earlier, children are often in environments where the dards are set by others, which leads to uncertainty a whether and how the child should be involved in determination of his or her needs or goals. Tradition professionals have been reluctant to engage childre their own assessment, especially in domains of importance, such as school. It is commonly believed children cannot reliably assess their own performance that their ability to identify and express their pers meanings and values may be limited.

The most important obstacle to changing assessi practices with children has been the dominance of developmental model. Like the medical model, tradit

al developmental models have been hierarchical and linear, emphasizing underlying performance components or abilities as the critical determinants of behavior. Thus, underlying impairments (e.g., sensory processing deficits, perceptual deficits, motor control deficits) are presumed to explain the extent and form of functional difficulties seen in children with clinical disorders. The context, both immediate and larger, and other characteristics of the person, if considered at all, are typically viewed as moderators of the effects of impairments but not as direct contributors to the observed behavior. This emphasis has supported a bottom—up approach to assessment that relies heavily on developmental tests and an approach to intervention that emphasizes normalizing the underlying processes as the best means to achieve greater function (Coster, 1995).

Many of the same criticisms of bottom-up models in adult rehabilitation can, and have been, applied to pediatrics (e.g., Heriza, 1991). More recent research and theory suggest that multiple factors simultaneously determine the structure of behavior at a given moment in time (Fischer & Wozniak, 1993). In addition to component abilities, as well as other characteristics of the person (e.g., muscle strength, body proportions), features of the task; the emotional, social, and physical context; and personal goals have been identified as potential critical determinants (Bronfenbrenner, 1992; Dunn, Brown, & McGuigan, 1994; Rogoff, 1990). Although they challenge the traditional developmental model, these new views support an occupation-centered approach because they emphasize the primacy of the task in the organization of a person's behavior.

Some areas of pediatric practice have shifted to a broader perspective for assessment and intervention. Most notably, practice in early intervention has emphasized a family-centered approach in which the family members' concerns are the starting point for defining needs and priorities (e.g., Meisels & Fenichel, 1996). Home-based intervention may be more grounded in the typical family occupations, and writings in this area have emphasized the importance of embedding therapeutic activities in the child's regular routines. Practice in school environments has also confronted therapists with the need to consider the context of the child both in trying to understand his or her behavior and in designing meaningful interventions (e.g., Clark & Miller, 1996; Griswold, 1994). The federal regulations under which school-based services are provided mandate that these services be education related, which requires that therapists identify the specific functional outcome their services for a child are designed to help achieve (Giangreco, 1995).

Despite these changes, pediatric practitioners are still hampered by the lack of a consistent occupation-centered framework to guide the assessment process and by a lack of tools that are congruent with such a focus. In the absence of appropriate tools, therapists must rely on inadequate measures designed for other purposes or on untested measures of their own invention. Both the information-gathering process and effective communication among ourselves and with other professionals are hindered in such a situation.

To address these concerns, it is proposed that the top-down model articulated by Trombly (1993) and by the symposium participants be used as a starting point for building a pediatric assessment framework that can guide the process of information gathering and the development of new measures that support an occupation-centered assessment process. The remainder of this article will illustrate how this proposal could be implemented. It will begin by describing a modified version of Trombly's model of occupational performance that was developed with the special situation of children in mind. Then the application of this framework to develop appropriate assessment questions will be discussed. The School Function Assessment (Coster, Deeney, Haltiwanger, & Haley, 1998) will be used to illustrate how the different assessment questions can be operationalized into scales that are psychometrically sound and preserve the essential focus on the child in context. Directions for future research and instrument development will also be suggested.

An Occupation-Centered Top-Down Model for Children

In the adult top-down model outlined by Trombly (1993), assessment begins with an inquiry into the roles the person needs and wishes to perform and current ability to perform these roles to his or her own satisfaction. This formulation is problematic for children for several reasons. The most significant difficulty is the awkwardness of trying to fit the occupations of children into the definition of a role, that is, a culturally defined set of physical, social, emotional, and cognitive expectations involving the performance of specified tasks. What role is the child fulfilling when he or she is playing on the playground at recess? Is this part of the same role he or she is fulfilling in the classroom or hallway? How would one define the expectations of these roles, and how would one assess whether the child is performing the role successfully? The term appears to have little communicative usefulness in these contexts.

An alternative approach to defining the most global level of assessment concern is to focus on the child's overall pattern of occupational engagement in relation to a particular context of importance. A focus on the orchestration of activities to improve or support quality of life was proposed by Frank (1996) in a discussion of the meaning of adaptation. If we apply this definition to chil-

dren, we would focus our assessment on the extent to which a child is able to orchestrate engagement or participation in occupations in a given context that is positive (which, for a developing child, would often include growth enhancing), personally satisfying, and acceptable to the adults in society who are responsible for children (e.g., parents, teachers). For example, to what extent is the child able to select and carry out valued play and peer group activities during his or her free time on the playground? This formulation acknowledges the importance of individual activities that are part of a particular occupation, as well as of the context, but is most concerned with the overall process of participation.

Though the formulation is different, this definition of the "top" or most global level of assessment shares many features with that described by Trombly (1993). In particular, it suggests that what matters most is not individual abilities and disabilities with regard to particular tasks, but the extent to which the person is able to construct a pattern of occupational engagement that meets individual needs and goals as well as societal expectations. Likewise, it is congruent with an approach to further assessment that is directed at uncovering the obstacles impeding successful occupational engagement and, thus, is individualized and oriented to problem solving.

The next level in Trombly's (1993) top-down model focuses on identifying the critical tasks that compose the client's key roles and on assessing whether performance difficulties with any of those tasks are impeding satisfying role or occupational performance. Again, some modifications are needed to fit this model to children. Because participation or pattern of engagement replaced roles as the key organizing concept in the previous level, the constructs of this level need to be congruent with this revised formulation. The focus on performance of critical tasks still appears appropriate as a way to narrow down the focus of assessment to specific aspects of occupational engagement that pose difficulties for the child. Because many of children's environments have a defined set of task expectations or possibilities, the tasks to be assessed could be defined in relation to the expectations of the typical child's environment. Thus, the assessment process may be somewhat less individualized than with an adult, though it still takes into account the particular context.

The third assessment level seeks to identify the specific aspects of task performance, or activities, that are most limiting the person's engagement in important occupations. Because a particular task may involve a variety of activities, closer scrutiny of an area of identified difficulty is needed to understand which particular activity limitations are having the greatest impact and, therefore, should be targeted for intervention. To use an example for children, the playground may have been

identified as a context of concern because of the very limited participation in playground occup Further assessment revealed that the child had § difficulty with tasks that involved group interaction physical games. The next focus of assessment wil identify the key activity limitations: The source o culty may range from limited skills to initiate and peer interactions; to inability to remember and basic game rules; to physical difficulty, such as run kicking a ball; to limited endurance during sus physical activity. The result of each of these activit tations may be limited participation in playground pations, but the potential intervention avenues to s more successful engagement may be quite differen thermore, consideration of activities in which the performing well may highlight areas of strength the be tapped to help facilitate the desired changes.

In turn, the pattern of activity limitations ide previously may also suggest underlying impairmen are affecting the child's performance. The patter suggest sensory processing difficulties, motor coc tion difficulties, or emotional regulation difficult devise the most effective intervention program, I assessment may be needed to evaluate whether the pairments are possible contributors to the limitation In this case, the therapist may use the familiar stand: tests already common in practice. The difference present approach, however, is that these assessments be used to help determine how to intervene, not w. goals of intervention will be. A child who has s defensiveness that is contributing to playground d ties will need an intervention that addresses, or a takes into account, this factor. However, the measuccessful outcome of intervention for this child whether there has been a change in sensory proc but whether there is a change in his or her occupengagement to a pattern that is more personally sat and more growth supporting.

A summary of the modified top-down more given in Table 1. Readers familiar with the disable classifications proposed by the World Health Orgation (1980), National Center for Medical Rehabil Research (U.S. Department of Health and Humawices, 1993), and others (Coster & Haley, 1992) with the close parallel in the levels of analysis included i of these models. One important difference in the discussed here is that it is organized around the proncept of occupational engagement of the indichild rather than concepts of limitation. Despite the ferences in emphasis and language, many of the procupation framework, in particular, the clarificat the different levels of analysis that need to be constituted.

Table 1 Conceptual Framework for Assessment

Level of Analysis	Disablement Term	Assessment Question	School Function Assessment Scale	
Participation Societal disadvantage		To what extent is the child included in or restricted from participating in the occupations typically expected of or available to a child of this age and culture?	Participation 3	
Complex task performance	Disability	To what extent is the child currently meeting expectations for the performance of important (complex) tasks expected of his or her same age peers in this culture and context?	Task supports: Assistance Adaptations	
Activity performance	Functional limitations	What are the child's current strengths and limitations in performance of specific activities required to accom- plish the major tasks expected of or desired by him or her?	Activity performance	
Component processes	Impairments	What is the status (intactness, development level) of the basic processes or components necessary for the performance of daily tasks and activities?		

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to understand the child's overall pattern of behavior (McEwen & Shelden, 1995).

Application of the Top-Down Approach to Developing Assessment Instruments

The top-down model was proposed as a guide for the assessment process. Can it also help guide the development of assessment instruments that are more suited to our purposes? Is it possible to construct standardized assessment tools that maintain a focus on occupational engagement? The issue is particularly critical for pediatric occupational therapists because pediatric practice is governed by regulations and traditions that emphasize standardized assessment procedures. Thus, maintaining our credibility in this practice arena may depend on use of sound quantitative measures to document both the need for and outcomes of our services. Yet, as indicated earlier, to date we have not seen many standardized assessment tools that are grounded in, and communicate to others, our focus on occupation. One might conclude that the absence of suitable assessment tools reflects a fundamental difference between the focus and philosophy of occupational therapy and the demands of standardized tests. However, although no standardized test may be able to reflect the full richness of a child's occupational being, I believe that we can go much farther than we have to capture and communicate an occupation perspective in our assessment tools. In this next section, I will describe the approach taken during the development of the School Function Assessment (Coster et al., 1998) to illustrate how we might proceed and to suggest other avenues for

To develop a standardized assessment tool, one needs

to translate, or operationalize, the construct of interest into a measurement construct. How might adaptation, as defined by pattern of occupational engagement (Frank, 1996), be translated into measurable terms? One possible approach is to consider the context that one is interested in and examine whether there are aspects of engagement that might be used to gauge success in this process. As we considered the context of elementary school for our assessment, we selected social participation as our first measurement construct and defined it as active engagement in the typical activities available to and expected of peers in the same context. We then identified six important environments in which all elementary school children participate: classroom, playground, transportation, transitions, cafeteria or eating area, and bathroom. Each environment (which we termed activity setting) was defined in terms of the important tasks (i.e., physical, cognitive, social) that are typically expected in the setting. For example, participation in transitions involves tasks such as moving from one area of the school to another and following school rules regarding both movement and other behavior. Participation on the playground involves a different set of tasks, such as playing games and communicating with peers.

The choice of participation reflects the focus of the top level of the assessment model on the child's overall pattern of occupations. It is also congruent with the language and intent of the Individuals With Disabilities Education Act of 1990 (IDEA; Public Law 101–476) under which school-based therapists provide services. One of the goals of IDEA is securing the opportunity for children with disabilities to participate in education in the least restrictive environment. We believed that once both the meaning and the context of reference were defined clearly,

participation could be rated reliably by persons who have observed the child frequently.

Assigning numbers to children's participation to generate a score is only meaningful if the numbers retain some clear connection with the different patterns of children's behavior. To do so, we designed a six-point scale whose rating points each reflect a different pattern of engagement from complete lack of active engagement (e.g., a child who cannot access the setting at all), to engagement that depends on the support of constant supervision or guidance, to engagement comparable to same age—same grade peers.

A child's pattern of engagement in a critical environment such as school can be considered from at least two levels of analysis. The first just described looks at the pattern in a specific environment, such as the playground, the classroom, or during transitions from one area of the school to another. The other important pattern emerges as one looks across these different ratings to identify areas of greater or lesser participation. Questions may arise such as: Why is this child participating so little on the playground when he or she is more engaged elsewhere? What accounts for this discrepancy? Does he or she want to be more a part of peer activities, or does he or she like some time to be on his or her own? Sometimes the critical issues highlighted by a review of the child's participation are not the ones that prompted the referral but may turn out to be those most in need of consideration. In this way, use of the School Function Assessment articulates an occupation perspective for the child's educational team and helps keep the focus on the whole child (Florey, 1996).

There may be other ways that this first level of the top-down model can be operationalized. One would like some way to obtain the children's own perspective on their occupations in school, especially with older students. Perhaps a combination of self-assessment and assessment by others could be used. Discrepancies between the two perspectives could serve as the starting place for further collaborative assessment and problem solving. Contexts other than school may require a different measurement construct or approach to assessment. How might we obtain a measure of the child's pattern of engagement in the occupations of his or her community? A time-use record is one relatively simple way that has been used to record the impact of disability on children's free-time pursuits (Brown & Gordon, 1987). However, differences in time use may reflect personal choices and preferences as well as limited opportunities. How else might we obtain a more individual portrait of occupational engagement?

The second assessment level is that of *tasks*. As noted earlier, children's tasks are often dictated by others, depending on the particular environment, and this is certainly the case in elementary school. Thus, to identify the essential

tasks to be included for the School Function Assessment, we examined school curricula and other literature to identify the most consistent expectations for elementary school children. For example, in all typical elementary schools, children need to move from one place to another, need to care for basic physical needs, need to participate in group lessons and other peer group activities, need to be able to follow school routines and rules, and need some way to communicate what they have learned. Difficulty with any of these tasks might affect the child's participation in school life, and, thus, they were appropriate candidates for inclusion in the test. Obviously, in another context, such as the home, a different set of essential tasks might be identified.

At the point where scores must be devised for task performance, one is confronted again with how to assign numbers to children's behavior in a meaningful (i.e., helpful) way. Many existing scales do not support an occupational therapy perspective that recognizes and values diversity of methods, including supported performance. For example, on the Scales of Independent Behavior-Revised (Bruininks, Woodcock, Weatherman, & Hill, 1996), a child cannot obtain a score above 0 for a task if he or she requires any degree of physical help from another person. Rating scales like these also do not acknowledge the extent to which children's activities are routinely supported by adult involvement (Rogoff, 1990). This kind of scoring system will be insensitive to the achievements of children who may make important gains in their ability to do a task interdependently with others but may never perform without some assistance.

What are some alternatives for measuring task performance? We chose to measure the supports (assistance and adaptations) needed by the child to perform each major task. We reasoned that this approach would encourage consideration of the important contextual factors that support children's occupational engagement. Furthermore, a reduction in intensity of supports (which would parallel the child's increasing capacity for autonomous engagement) is a meaningful outcome for services in the school setting. In other environments, other types of ratings might be appropriate. For example, in the home environment, the extent to which a child can complete necessary daily tasks with socially acceptable quality within reasonable time limits may be relevant. In the play environment of home, the extent to which the child can initiate and sustain a variety of personally satisfying play activities may be a relevant focus for measurement.

The third level of the assessment framework is *activity* performance. This level moves beyond global consideration of task performance to identify which of the variety of activities in that task area can be completed satisfactorily

and which may be limiting successful task accomplishment. As was true with the previous levels, to design an assessment instrument for this level, one must specify the context because the context determines not only which activities are likely to be expected or desired, but also what features of the context are likely to affect the form and process of the activity. For example, carrying a tray of food from a counter to a table may be a necessary activity for eating in the school cafeteria but is unlikely to be part of eating at home. Thus, for the School Function Assessment, we needed to identify the essential activities that occur during a school day in most elementary schools. Development of a similar assessment instrument for community participation would require identification of the essential activities that a child typically performs when in the community.

As Florey (1989, 1996) eloquently pointed out on several occasions, our professional philosophy is clear that, as occupational therapists, we should be concerned with the full range of a child's daily activities and with all of their various demands. Nevertheless, our texts and assessment tools have often fallen short of this ideal by including only selected areas of performance. Sensory, physical, cognitive, and basic ADL functioning have received far more attention than the social and emotional aspects of a child's daily life. We cannot implement an occupationcentered assessment unless our tools and approach recognize, as Florey (1996) stated, that children have "'playmate disorders'...'best friend disorders,' 'no one to eat lunch with disorders" (p. 428). The need for attention to social and emotional aspects of occupation among children with disabilities is reiterated in the literature (Hirst, 1989; Resnick, 1984). It is part of our professional role to identify, try to understand, and assist with these difficulties; thus, we took care to address psychosocial concerns when constructing the School Function Assessment.

To develop standardized measures at the activity level, we also had to find meaningful ways to assign numbers to patterns of performance. For the School Function Assessment, we constructed a rating scale whose wording emphasizes the extent of the child's own contribution to the performance of the activity (rather than the extent of his or her limitation). Each rating point represents an increment in the ability to initiate an activity and complete it to a degree increasingly similar to that of peers (although perhaps using a different method). Other approaches may be possible or necessary in other contexts. For example, in the home context, comparison of activity performance with that of peers may be less relevant than a measure of the social acceptability of the outcome or of family or personal satisfaction. In each case, design of the measure should reflect what is meaningful to the persons in that context and what will be useful to guide effective intervention planning.

The fourth level, that of *component processes*, is already addressed by many of the currently available standardized tests, including developmental tests and tests of component performance ability, such as the Bruininks-Oseretsky (Bruininks, 1978), the Peabody Developmental Motor Scales and Activity Cards (Folio & Fewell, 1982), and the Sensory Integration and Praxis Tests (Ayres, 1989). However, there is a pressing need for more research that tests the many assumptions in our literature about links between underlying performance abilities measured by these tests and occupational performance (Jette, 1995; Trombly, 1995). This important research agenda will be difficult to implement until we have more occupation-centered measures suitable for such purposes.

Looking to the Future

The top—down model offers a valuable guide for future work in pediatric assessment. It provides a structure to help articulate assessment questions that are more congruent with our focus on occupation and helps to clarify the different levels of analysis that need to be considered as we try to understand a child's overall pattern of engagement in occupations. Instruments framed in these terms help communicate the occupational therapy perspective to the children, family members, and other professionals we work with and help identify the areas of a child's life where our services could make a meaningful contribution.

Future work will require close creative collaboration between clinicians and researchers. The conceptual framework of the School Function Assessment was transformed into the final version of the instrument through the efforts of hundreds of clinicians and educators who volunteered their time to provide feedback about the content, rating scales, and practical applications of the instrument; to educate the project staff about constraints on assessment time and activities imposed by their school systems; and to assess more than 700 children with disabilities to test the instrument's quality. This kind of linkage will continue to be critical in order to develop assessment practices and instruments that are not only good in concept, but also meaningful in practice.

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