

# Journal of Psychoeducational Assessment

<http://jpa.sagepub.com>

---

## **Projective Test Use Among School Psychologists: A Survey and Critique**

Robin L. Hojnoski, Rhonda Morrison, Melissa Brown and William J. Matthews

*Journal of Psychoeducational Assessment* 2006; 24; 145

DOI: 10.1177/0734282906287828

The online version of this article can be found at:  
<http://jpa.sagepub.com/cgi/content/abstract/24/2/145>

---

Published by:

 SAGE Publications

<http://www.sagepublications.com>

**Additional services and information for *Journal of Psychoeducational Assessment* can be found at:**

**Email Alerts:** <http://jpa.sagepub.com/cgi/alerts>

**Subscriptions:** <http://jpa.sagepub.com/subscriptions>

**Reprints:** <http://www.sagepub.com/journalsReprints.nav>

**Permissions:** <http://www.sagepub.com/journalsPermissions.nav>

**Citations** (this article cites 20 articles hosted on the SAGE Journals Online and HighWire Press platforms):  
<http://jpa.sagepub.com/cgi/content/refs/24/2/145>

# Projective Test Use Among School Psychologists

## A Survey and Critique

Robin L. Hojnosi  
*University of Memphis*

Rhonda Morrison

Melissa Brown

William J. Matthews  
*University of Massachusetts, Amherst*

The use of projective techniques by school psychologists has been a point of interest and debate, with a number of survey studies documenting usage. The purpose of this study is to update the status of projective use among school psychologists, with a specific focus on their use in the social emotional assessment of children in schools. In addition to gathering information about the frequency of use, this study provides information about the types of assessment activities in which the assessments are used and practitioner's perception of the utility of specific instruments. Results indicate that school psychologists view projective assessments as moderately useful and that they continue to use projectives across grades and for a variety of educational purposes, including eligibility determination and intervention development. Results are discussed critically in the context of previous research.

**Keywords:** *projectives; assessment; practice trends*

Test usage among clinical psychologists has been an interest of researchers, with numerous articles on the topic documenting practices since 1935 (Lubin, Larsen, & Matarazzo, 1984; Lubin, Wallis, & Paine, 1971; Sundberg, 1961; Watkins, Campbell, Nieberding, & Hallmark, 1995). Three major findings emerged from the Watkins et al. (1995) survey of 412 members of the American Psychological Association that summarized the status of test usage among clinical psychologists. First, across settings, clinical psychologists appeared to consistently employ a select core of assessment procedures. Furthermore, those procedures had been consistently employed, for the most part, across several decades. Finally, results suggested that despite increasing negative opinions about projective techniques by academics, these instruments were still listed in the top 10 used by survey respondents.

Specific interest in testing practices among school psychologists has been documented in the literature since the early 1980s. Early survey findings in terms of frequency of test usage in the domains of personality and behavior indicate school psychologists frequently

---

**Authors' Note:** Please address correspondence to Robin L. Phaneuf, 202 Psychology Building, University of Memphis, Memphis, TN 38152; e-mail: [rphaneuf@memphis.edu](mailto:rphaneuf@memphis.edu).

use various projective assessments, interviews, and informal observations and rating scales (Goh & Fuller, 1981; Goh, Teslow, & Fuller, 1981; Prout, 1983). Follow-up survey studies appear to be equivocal, with the degree of change in testing practices dependent on the study reviewed. In the decade subsequent to the aforementioned studies, change in practice with specific regard to the use of projective assessments initially appears to have been minimal, with Hutton, Dubes, and Muir (1992) reporting a small change in test usage in their survey of 389 members of the National Association of School Psychologists (NASP). Specifically, the use of behavior-rating measures had increased and the use of certain projective assessments had decreased several percentage points. Stinnett, Havey, and Oehler-Stinnett (1994), in their survey of 123 school psychologists, found that when compared to the results of Goh et al. (1981), the use of projectives had decreased significantly. However, when the same results are compared to those of Hutton et al. (1992), use of the methods appears to have increased. Wilson and Reschly (1996) echoed the notion of little overall change in the field in their survey of 251 NASP members. Although structured observations were ranked first in terms of frequency of usage, projectives, including the Bender-Gestalt and interpretative drawing tests, were still ranked among the top 10 most used instruments. Finally, in the most recent study of assessment practices in the social/behavioral/emotional arena (Shapiro & Heick, 2004), results suggest school psychologists are increasing their use of interview, rating, and observational methods of assessment and decreasing their use of projectives.

Shapiro and Heick's (2004) results also indicated that almost 90% of practitioners surveyed reported that behavioral assessments provide a valuable link to intervention. Furthermore, survey respondents in the Stinnett et al. (1994) study rated informal assessment methods including interviews and observations as more important than projective methods in terms of the significance of the information yielded. These notions of treatment utility (Hayes, Nelson, & Jarrett, 1987; Nelson-Gray, 2003) and social validity (Wolfe, 1978) are critical in evaluating the quality of an assessment tool. In addition to demonstrating technical adequacy in the more traditional psychometric sense of reliability and validity, ideally, assessment tools will have strong treatment utility and social validity. To maximize the effectiveness of assessment, procedures must be linked to intervention in a manner that results in program and intervention planning that is acceptable, meaningful, and worthwhile. That is, assessment procedures must be useful. Certainly, these standards prompt practitioners and scientists to critically consider whether many of the assessment tools in popular use meet such criteria. Some would argue especially that the criterion of treatment utility is seldom achieved with many norm-referenced test procedures used for intelligent and achievement testing (Howell & Nolet, 1999; Marston, 1989; Shinn, 2002). Questionable practice in one domain, however, should not provide a rationale for questionable practice in another.

In the domain of social emotional assessment, tools exist that have stronger treatment utility and social validity. Although the extent to which they demonstrate (and should demonstrate) traditional forms of reliability and validity are less clear (Kratochwill & Shapiro, 2000), the usefulness of more objective measures has been demonstrated. In their survey of 195 specialist-level school psychologists, Cheramie, Griffin, and Morgan (2000) found assessments requiring a lower order of inference such as interviews, direct observations, review of records, and behavior rating scales as most useful in determining classification for

emotional disturbance and developing classroom recommendations. Survey respondents rated projective techniques as least useful. Furthermore, with regard to consumer satisfaction, in a survey of 339 members of the NASP, Eckert, Hintze, and Shapiro (1997) found behavioral assessment procedures to be more acceptable than traditional assessment procedures that included projective drawings in the assessment of externalizing behavior problems.

Given issues of psychometric adequacy, treatment utility, and social validity, the continued use of projective assessments by school psychologists is puzzling (Lilienfeld, Wood, & Garb, 2000). Use of such instruments in educational settings remains a source of debate and controversy in the field. Indeed, issues of professional journals have been devoted to discussions of both the merits and the criticisms of projective assessments, with the debate remaining active across decades (see Knoff, 1983; Witt, 1993) both in the literature and in practice. It is important to note that not all psychologists, both clinical and school, share the same perspective with regard to their use. Indeed, some clinicians find these tools useful. It is equally important to note, however, that even individuals who have historically been linked to the study and promotion of projectives (Knoff, 1983) more recently appear to advocate a more balanced approach that first considers the use of more objective measures in addressing social-emotional behavior of children; "projective instruments . . . are only useful (if at all) in the earliest stages of the RQC (Referral Question Consultation) process" (Knoff, 2002, p. 1299).

The purpose of this study is to follow up on previous survey research regarding test usage among school psychologists, with a specific focus on the use of projective assessments in the social-emotional assessment of children in schools. In addition to gathering information about the frequency of use, this study provides information about the types of assessment activities in which the techniques are used and practitioners' perceptions of the utility of specific assessment instruments. This focus was selected because of recent attention to best practices in assessment on a national level and because previous studies have not explored in detail the types of assessment activities in which projectives are used. It was hypothesized that with increasing professional attention to the blueprint for school psychology training and practice (Ysseldyke, Dawson, Lehr, Reschly, & Telzrow, 1997), professional standards for assessment tools and practices, and increasing national emphasis on functional behavior assessment as a cornerstone of the reauthorization of the Individuals With Disabilities Education Act (IDEA, 1997), the use of projective techniques would be minimal and, in general, practitioners would report these techniques as lacking in utility. The results of the study are presented in the context of a critique of the use of projective techniques in school psychology.

## Method

This survey was a partial replication and extension of the work conducted earlier regarding test usage among school psychologists (Goh & Fuller, 1981; Goh et al., 1981; Hutton et al., 1992; Prout, 1983; Stinnett et al., 1994; Wilson & Reschly, 1996). The survey included demographic characteristics, primary orientation of graduate training programs, descriptive information of employment settings, number of assessments administered, perceptions of utility of different projective assessments, and the frequency and purpose of projectives administered.<sup>1</sup>

## Practitioner Sample

A random sample of 500 practicing school psychologists was selected from the 2002 NASP membership list. The sample was randomized by geographic region consistent with Wilson and Reschly (1996). Twelve percent of respondents were from the Northeast region, 13% were from the Mid-Atlantic region, 11% were from the south Atlantic region, 4% were from the east south central region, 18% were from the east north central region, 4% were from the west south central region, 10% were from the west north central region, 9% were from the mountain region, and 19% were from the Pacific region.

## Materials

The survey asked respondents to estimate the total number of educational and social emotional assessments given during the 2000-2001 academic year. In addition, respondents were asked to indicate the percentage of social-emotional assessments that relied primarily on the use of projective techniques. That is, respondents were asked to estimate the percentage of social-emotional assessments in which projective data were of primary importance in the assessment. The next part of the survey required respondents to indicate whether they used a specific instrument and to rate the usefulness of the listed instrument, using a Likert-type scale ranging from 1 to 5 (i.e., 1 = *not useful* to 5 = *very useful*). Finally, respondents were asked to estimate the frequency with which they used the technique for specific educational purposes.

Assessments listed were sentence completion (SC), house-tree-person (HTP), kinetic family drawing, thematic apperception test, children's apperception test (CAT), Bender visual-motor Gestalt, the Rorschach, and the draw-a-person. Although implicit by context, it was not explicitly stated that respondents should consider only the Bender-Gestalt when used as a projective technique as opposed to a measure of objective information. Space was provided for respondents to include instruments not listed as "other," although participants did not write in responses in this section. Educational purposes listed were diagnostic or initial assessment, determination of eligibility for services, intervention or treatment planning, intervention or treatment evaluation, triennial reevaluation, and developing hypotheses for additional assessment. Educational purpose categories were differentiated further by grade to reflect the possibility that assessment techniques may be used differentially according to the age of the child. Grade categories listed were kindergarten through Grade 5, Grades 6 through 8, and Grades 9 through 12.

## Procedure

The survey was mailed in April 2002 with a brief letter explaining its purpose and requesting participation. A postage-paid envelope was included for return of the survey, and a Web address was provided for online completion of the survey. Surveys were returned by 175 sample members, for a return rate of 35%. Ten surveys were completed online; the remainder was returned through the mail. No further efforts were made to obtain additional survey returns. Although a return rate of 35% is lower than what is desired, the range of response rates from similar studies is 39% to 78%, suggesting that the low response rate for this study is not so discrepant as to discredit the results.

**Table 1**  
**Demographic Characteristics for the Current Sample**

Variable	<i>n</i>	%
Gender		
Female	131	74.8
Male	39	22.2
Degree		
Doctoral	44	25.1
Specialist	131	74.9
Training program orientation		
Eclectic	67	38.2
Cognitive-behavioral	58	33.1
Behavioral	21	12.0
Psychoanalytic	16	9.1
Systems focused	3	1.7
Other	9	5.1
Setting		
School	160	91.4
Other	15	8.6

## Data Analysis

Descriptive statistics were used to examine survey responses and to compute results. Frequency distributions were used to analyze the survey responses. Cases in which respondents completed fewer than 2 assessments and one case in which a respondent indicated completing 630 assessments in an academic year were considered outliers and were dropped from the analyses of the data, which resulted in 150 usable cases. In addition, cases in which information was missing were not included in the analyses. The number of cases used in the analyses varied from item to item. The specific number of cases used is indicated with the results.

## Results

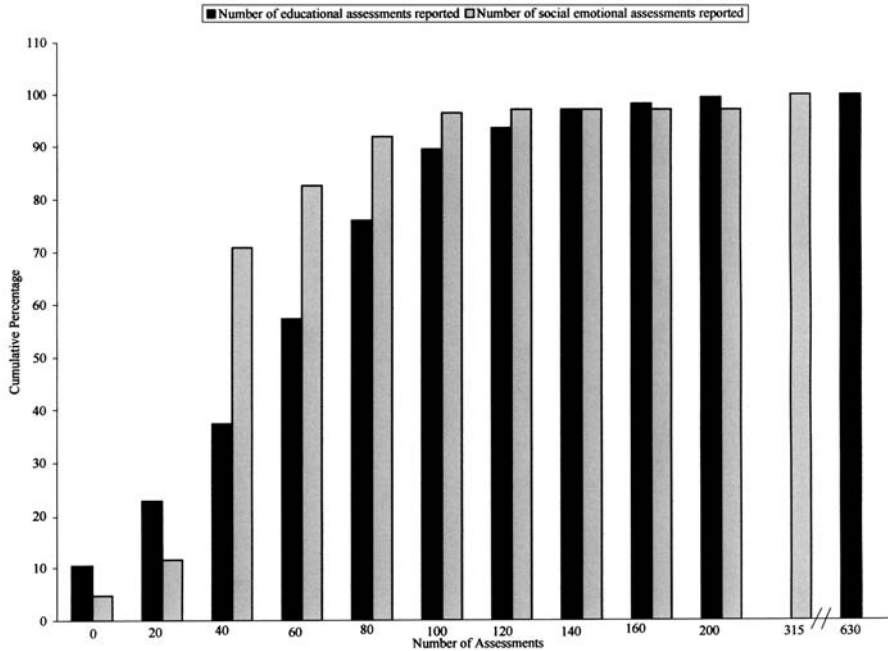
### Sample Characteristics

Demographic characteristics of the current sample are presented in Table 1. In general, there was variability in the sample in terms of years' experience as a school psychologist and orientation of graduate training programs, variables likely to influence responses to the survey. Variability was considered an asset, making the results more representative of the field in general.

### Test Usage

Respondents indicated that the mean number of educational assessments given during the 2000-2001 school year was 65.13, with a standard deviation of 37.75, a range of 4 to 200, and a mode of 60. The mean number of social-emotional assessments given in the

**Figure 1**  
**Frequency Distribution Showing Cumulative Percentages of Reported**  
**Number of Educational and Social Emotional Assessments**



same time period was 33.51, with a standard deviation of 27.40, a range of 0 to 135, and a mode of 25. A frequency distribution showing cumulative percentages for both total number of educational assessments and social-emotional assessments is depicted in Figure 1. Respondents reported that they used projectives in conducting social-emotional assessments for an average of 10.6% of assessments given (range = 0-100,  $SD = 23.84$ ). Although 93 (62.00%) of the respondents indicated they did not use projectives in any of their social-emotional assessments, 5 (3.40%) of the respondents indicated they used projectives in all of their social-emotional assessments and 16 (9.30%) respondents indicated they used projectives in 50% of their social-emotional assessments. Furthermore, 91 (60.70%) of the respondents indicated they used SC, the most used technique, in their assessment practices. This suggests that, in general, more than half of the sample is using some type of projective technique in practice. Indeed, even the least used instruments were reportedly used by more than 15% of the respondents.

Table 2 presents measures listed in order of the number of total mention scores (TMSs) for each instrument. This score represents the total number of respondents indicating they used that instrument (Goh et al., 1981). The percentage of the total number of respondents using a specific instrument is included as well. Sentence completion was the most used

**Table 2**  
**Total Mention Score (TMS), Percentage of School Psychologists Using Specific Projective Techniques, and Utility Ratings for Specific Techniques**

Instrument	<i>n</i>	TMS	%	<i>n</i>	Mean Utility Rating	<i>SD</i>
Sentence completion	150	91	60.70	89	3.56	1.00
Bender-Gestalt	133	66	49.60	63	3.70	1.26
House-tree-person	138	60	43.50	59	3.20	1.06
Kinetic family drawing	139	56	41.30	55	3.27	1.11
Draw-a-person	139	47	26.90	71	3.34	1.12
Thematic apperception test	135	42	31.10	37	3.43	1.14
Rorschach	134	22	16.40	22	3.55	1.56
Children's apperception test	134	22	16.40	18	3.00	1.19
Other	131	18	13.70	18	4.06	1.11

**Table 3**  
**Total Mention Score (TMS) Across Grade and TMS by Grade for Educational Purposes**

Instrument	Diagnostic				Eligibility				Treatment Planning			
	TMS	K-5	6-8	9-12	TMS	K-5	6-8	9-12	TMS	K-5	6-8	9-12
Bender-Gestalt	83	42	23	18	42	16	12	14	32	15	9	8
Children's apperception test	13	13	0	0	9	7	0	2	5	5	0	0
Draw-a-person	14	42	16	16	38	21	8	9	26	14	5	7
House-tree-person	69	36	16	17	40	21	8	11	31	17	7	7
Kinetic family drawing	59	31	15	13	28	17	5	6	24	12	5	7
Rorschach	25	6	8	11	15	3	5	7	15	3	4	8
Sentence completion	106	57	26	23	66	32	15	19	47	24	10	13
Thematic apperception test	38	13	9	16	26	10	4	12	27	6	13	8
Instrument	Treatment Evaluation				Reevaluation				Developing Hypotheses			
	TMS	K-5	6-8	9-12	TMS	K-5	6-8	9-12	TMS	K-5	6-8	9-12
Bender-Gestalt	25	12	6	7	59	29	14	16	42	22	12	8
Children's apperception test	4	4	0	0	8	7	0	1	10	9	0	1
Draw-a-person	21	11	5	5	45	24	12	9	36	19	9	8
House-tree-person	29	17	6	6	42	20	12	10	45	21	11	13
Kinetic family drawing	19	9	4	6	26	16	5	5	27	16	5	6
Rorschach	11	3	4	4	9	5	2	2	13	5	2	6
Sentence completion	39	17	10	12	94	56	17	21	59	28	15	16
Thematic apperception test	16	5	4	7	29	13	7	9	20	8	4	8

projective technique, followed by the Bender-Gestalt and the HTP. The Rorschach, the CAT, and instruments in the "other" category were ranked as the least used instruments in terms of total mention scores.



Data regarding the utility of projective techniques as rated by respondents also are presented in Table 2 with the mean rating and standard deviation. A rating of 5 indicates *very useful*, and a rating of 1 indicates *not useful*. Instruments in the “other” category were rated as most useful. Because respondents did not write in instruments included in this category, although there was space to do so on the survey form, no conclusions can be drawn regarding the specific instruments rated as most useful. The Bender-Gestalt was rated as the second most useful instrument followed by SC. In general, the projective techniques listed were rated as moderately useful as all techniques had a mean rating equal to or greater than 3.

To determine the overall TMS for each instrument within the educational purposes specified, the TMS for each grade range was summed. This approach potentially inflates the number of respondents indicating that they used the specified tool, as the same respondent may use the tool in different grade categories. However, the number of total mentions is important in rank ordering the tools in terms of their total use. To preserve the integrity of the data, TMSs in each grade category are reported in addition to the overall TMS for each educational purpose. The category Other is not included in the tables. Because respondents did not write in specific tools in this category, the TMS for this category is uninterpretable. Table 3 presents measures listed alphabetically for each educational purpose surveyed. Respondents reported using some type of projective instrument across all educational purposes and all grade categories.

Two primary patterns appear when examining the survey data. First, for the most part, the same instruments were listed in the top three positions for TMS and for overall use across educational purpose categories. SC appears to be the most used projective instrument across all educational purpose categories both in terms of overall use and within grade ranges. Indeed, 60% of participants indicated they used SC in conducting assessments. The second most used instrument varied, depending on the educational purpose specified, although the Bender-Gestalt was second most used in terms of TMS for four of the six educational purpose categories.

The second pattern appeared in terms of the least used instruments. Least used instruments were consistent for TMS, overall use, and within-grade ranges across educational purposes. The CAT was listed as the least used and the Rorschach listed as the second least used instrument for all but the diagnostic category. In this category, the draw-a-person was the second least used instrument. Despite their limited use for specific educational purposes, the CAT, the Rorschach, and the draw-a-person were reportedly used in general assessment practices by more than 15% of the respondents (CAT = 22, 16.40%; Rorschach = 22, 16.40%; draw-a- person = 47, 26.90%).

## Discussion

### Major Findings

The results of this survey raise some questions regarding the practice of school psychology and the role and function of the school psychologist. The range of the number of evaluations reported by respondents indicates that some school psychologists are likely

spending most of their time—indeed, if not all their time—conducting evaluations, with the highest number reported as 630, although this value was so extreme it was dropped from all analyses. Still, the next highest number of assessments given was 200. The variability in number of evaluations was similar in the social-emotional domain. Certainly, one would question the quality and comprehensiveness of such a large number of evaluations. On the other hand, some respondents reported conducting no evaluations; the question here is in what other professional activities are they engaged? Regardless, the pure and extreme range of practice indicates the variability of role and function that exists in the profession, with some practitioners likely solely focused on assessment whereas others appear to have a more expanded role.

With regard to the specific focus on the use of projectives, the results of this survey indicate that school psychologists continue to use projective techniques for a variety of educational purposes and across all grade categories despite evidence that such techniques are of questionable reliability, validity, and utility (Anastasi & Urbina, 1997). Indeed, the most frequently used projective technique, SC, was reportedly used by 60% of all respondents. It was the most used instrument across all educational purposes and with children in all grades.

The results suggest minimal correspondence between utility ratings and usage. The category of other was rated as the most useful, yet it ranked among the lowest three instruments in terms of TMS and actual use for educational purposes. Because respondents did not write in specific instruments in the “other” category, this discrepancy between perceived utility and reported use is not entirely interpretable. However, similar patterns were evident when examining other tools. The Rorschach was rated as the third most useful instrument but was ranked in the lowest three instruments in terms of actual use. Finally, the CAT, which was reported to be the least used instrument for all educational purposes, still received a utility rating greater than 3 on a 5-point scale, indicating moderate utility. Conversely, SC, the most used instrument, ranked fourth in terms of utility. HTP, the third most used instrument, was ranked eighth in terms of utility. The differences in utility ratings, however, are a matter of decimal points, with all projective techniques receiving ratings indicating moderate utility.

The results from this survey further indicate that not only are respondents using projective techniques, they are using them for purposes for which they have not been validated specifically. In their survey of 293 school psychologists, Kennedy, Faust, Willis, and Piotrowski (1994) found that the primary rationale for using projective techniques was hypothesis generation. The results from this survey, however, indicate that school psychologists are using projective techniques to make important educational decisions, such as eligibility determination and intervention planning. Although practitioners frequently comment that they use projectives merely as “ice breakers,” Kennedy et al. suggested this is not the case, and the results from this survey support that, indeed, school psychologists are using projective techniques in important educational decision making.

## Limitations

There are several primary limitations to consider when reviewing the results of the survey. First, the representativeness of the sample is questionable. Although geographic rep-

resentation seems to be fairly adequate, selection bias may be an issue. That is, perhaps, that the sample primarily includes respondents who currently use projectives and have a favorable perspective on their use. Respondents who do not use projective techniques, or are critical of their use, may not have chosen to respond to the survey. This could potentially inflate the perceived use of projectives.

A related limitation is the number of respondents answering specific questions. Although a sample size of 150 is adequate, the sample size varied dramatically from item to item due to missing responses. For example, 148 respondents replied to the general question about the use of projectives, but when asked about the utility of specific techniques, the sample size dropped to fewer than 20 respondents. Low responding was also noted for some of the educational purpose categories. It is unclear what the lack of response indicates. It is plausible that the lack of response indicated that the respondent did not use the specific instrument at all and therefore did not answer further questions about the instrument. This is supported by the observation that smaller sample sizes for educational purpose categories were consistent with fewer numbers of respondents reporting use of the instrument. For example, only 22 respondents indicated using the CAT; the sample size for use across educational categories for the CAT was 22. Still, given the small sample size in some cases, caution must be used in interpreting the results.

A final limitation is in regard to the instrumentation. Several points of clarification were not permitted by the survey, which may have influenced interpretation of results. Respondents were not asked to clarify whether they were using the Bender-Gestalt and the HTP as an indicator of emotional state, as a measure of visuo-constructive abilities, or both. Caution should be used in interpreting the results of the study, particularly with regard to the frequency of use of these two instruments. Furthermore, there are a variety of sentence completion tasks, and respondents were not asked to specify the type of sentence completion used. Information of this nature would clarify whether respondents were using self-developed instruments or standard instruments. In addition, respondents did not write in specific instruments in the "other" category, making these data largely uninterpretable. This category may have included informal techniques, more objective techniques, or other less widely used projective techniques. The category Other also could have included objective measures that were used for projective purposes. For example, a school psychologist may use an intelligent test to observe the child's behavior under cognitive demands rather than for a psychoeducational assessment. This level of specificity of data could have enhanced the interpretation of results, particularly given that instruments in this category were rated as most useful but least used. Finally, the scale respondents used to rate the instruments specified only dimensional characteristics for the anchors. It is unclear what characteristics respondents assigned to the three middle scores. It is likely there was a range of descriptors, which limits interpretation of the ratings provided and the standardized nature of the survey.

## Critique

The continued use of projective techniques for a range of educational decisions as demonstrated in this survey is of concern for several reasons. From a technical adequacy perspective, the psychometric properties of many of the instruments included in the survey

are weak. Poor test-retest reliability, interrater reliability, and poor predictive validity call into question the continued use of tools that do not meet adequate standards for assessment instruments (Anastasi & Urbina, 1997; Gittelman Klein, 1986). In addition to reliability and validity, these instruments often overidentify pathology and have not been demonstrated to be appropriate for use with culturally or ethnically diverse populations (Lilienfield et al., 2000). Furthermore, there is limited research to suggest that practitioners using projective techniques often employ personalized systems in scoring or interpreting the tests (Kennedy et al., 1994). Although data of this nature were not gathered in this study, the issue is still of concern. Use of assessment instruments with poor psychometric properties with disregard for identified scoring procedures violates professional standards and potentially places children at risk for overidentification and misidentification, consequences that must be taken into consideration when selecting an assessment instrument. Indeed, the consequential validity (Messick, 1980) of instruments is particularly important when high-stakes decisions are being made about individuals (Eckert et al., 1997).

Even if projective assessments are not being used as the primary source of data in making educational decisions, their inclusion in an assessment battery is debatable on several counts. Even if such techniques are used primarily to generate hypotheses (Kennedy et al., 1994), research suggests that the initial hypotheses may have considerable influence in the hypothesis-testing process (Faust, 1984). Moreover, the results of this study suggest that projectives are used for purposes far beyond hypotheses formulation. The contribution of projective techniques to diagnosis and intervention development may be viewed in the context of the historical inadequacies of aptitude by treatment prescriptions in education (Kavale, 1990). Furthermore, the extent to which they contribute valuable information above and beyond other information, or the incremental validity, is questionable (Lilienfield et al., 2000). Concerns about the validity, reliability, and utility of projective techniques caution their inclusion in effective assessment practices. Their use in conjunction with more valid estimates of functioning might, in fact, serve to weaken the validity of the entire assessment (Kennedy et al., 1994). Finally, the American Psychological Association's (2002) Ethical Principles and Code of Conduct, the National Association of School Psychologists' (2000) *Principles for Professional Ethics*, and the Code of Federal Regulations for the Individuals With Disabilities Education Act (1997) all convey the importance of using assessment instruments only for purposes consistent with evidence regarding their useful and proper application. The inclusion of projective techniques for a variety of purposes for which they have not been validated raises significant ethical issues and concerns.

From an efficiency perspective, with the increasing demand for services, school psychologists must consider issues of cost-effectiveness and cost benefit in selecting instruments to include in assessment procedures. It is incumbent on school psychologists to use instruments that provide maximum return for the effort and cost. Yates and Taub (2003) recommended that the addition of an instrument to an assessment battery be accompanied by a rationale that includes a focus on the cost benefits of the addition in terms of the improvement in treatment outcomes or prevention. Also, one must consider the cost benefits in terms of improvement of the reliability and validity of the overall assessment battery. Instruments of questionable or null incremental validity add additional cost to the assessment process with

little return. In addition, resources spent in time-consuming assessment procedures that contribute little to the assessment process are diverted from time spent delivering direct services to children in an attempt to improve outcomes (Yates & Taub, 2003). One could argue that projective instruments are both time and cost inefficient, and their use, ultimately, leads to additional assessment (Knoff, 2002).

Given what exists in the empirical literature, one might ask why the use of assessment instruments that fail to meet professional standards of technical adequacy persists? Although there was no attempt in our survey to assess practitioners' meaning and value associated with the projectives, we would suggest two possible explanations. The psychologist who uses projective assessments will often state that projectives provide additional information about the inner life of the child or information not available from a functional behavioral assessment or rating scale. Another comment often heard is that projectives provide a more intuitive feel for the child. Such comments speak to the long-standing belief in psychological practice in the clinical intuition of the practitioner. Clinical intuition versus actuarial prediction dates back to the work of Paul Meehl in the 1950s. As Dawes, Faust, and Meehl (1989) indicated, the advantage of statistical models over human judges has been impressively replicated in many different domains. Although the statistical models are based on human expertise, human judges are extremely prone to predictive bias and fail to follow their own predetermined model criteria. It would seem that the projective assessment instrument becomes a projective for the assessor used to confirm preexisting beliefs or knowledge of the person being assessed. Used in this manner, projective assessments can be quite reinforcing for the assessor but can result in less than optimal consequences for the assessee.

A second and perhaps less esoteric explanation for the continued use of these instruments may be a lack of knowledge of best practices, inadequate professional training in other methods of assessment, and simple habit. Simply stated, if one were trained in graduate school in the use of projective assessments and used such assessments in professional practice, one is likely to continue to do so. This explanation is consistent with early research that indicated clinicians use their personal experience with a test as a primary selection criterion and that test usage is not necessarily a function of test quality (Reynolds, 1979). The average years of experience for respondents in this study was approximately 13. If the majority of respondents had between 10 and 20 years of experience, it is likely that these professionals were trained at a time when the use of projectives was more of a focus than it is currently. Thus, the training one receives may highly influence choice of assessment methods. This logic has implications for training of practitioners, and the debate regarding the use of projectives extends into the training literature, with some professionals advocating the continued inclusion of these instruments in training programs (Laurent, Swerdlik, & Handler, 1992).

In sum, despite the controversy that surrounds projective tests and numerous reasons to discontinue their use in educational practices, it appears that the use of such techniques persists. Although more recent research seems to suggest a general shift toward more objective methods of social-emotional assessment, school psychologists continue to use projective techniques. Indeed, almost 53% of the sample in the survey by Shapiro and Heick (2004) used projectives in 4 or more of their last 10 cases. Furthermore, the results of the current survey indicate that projective instruments are being used for a range of educational purposes,

despite the lack of empirical evidence supporting their reliability, validity, and utility in these areas. Response data indicated that school psychologists are conducting an average of 33 social-emotional assessments per year, and at least 10% of these are using projective instruments as a source of data. Although this appears to be a small percentage, in light of recommendations for training and practice in assessment, increasing focus on accountability, and changes in IDEA emphasizing the use of functional assessment, it seems that reliance on, or even inclusion of, such tools for any assessment raises important issues about best practices.

For school psychologists to practice in a manner consistent with ethical codes and standards and in the spirit of best practices, we need to focus on assessment that reduces inferences, leads to data-based decision making, and links to intervention. A broader context for assessment exists that assumes that one of the goals of school psychological services is the identification and implementation of effective interventions and that service delivery occurs in a context that addresses important variables of acceptability, social validity, treatment integrity, and transfer and generalization of skills and knowledge (Knoff, 2002). Assessment, then, is conducted from an ecological perspective, using multimethod, multisource, and multisetting assessments that facilitate the use of a problem-solving approach to improving outcomes for children. Advances in assessment technology have resulted in a number of tools for practitioners that increase the functional relation between assessment and interventions (Reschly & Ysseldyke, 2002). Curriculum-based assessment and curriculum-based measurement (CBM) provide strategies for assessing academic difficulties using direct measures of relevant behavior in natural settings (Deno, 1985; Howell & Nolet, 1999; Shapiro, 2005; Shinn, 1989). Likewise, behavioral observations, functional behavioral assessment, and behavior rating scales provide school psychologists with assessment tools for the social-emotional domain. With the use of any instrument, it is essential that school psychologists evaluate the technical adequacy of any instrument and tool in accordance with the purpose of the assessment, the individual being assessed, and the ultimate goal of the provision of services.

## Note

1. A copy of the survey instrument may be obtained by contacting William Matthews, School Psychology Program, School of Education, University of Massachusetts, Amherst MA 01003; e-mail: shamrock@educ.umass.edu.

## References

- American Psychological Association. (2002). Ethical principles of psychologists and code of conduct. *American Psychologist, 57*, 1060-1073.
- Anastasi, A., & Urbina, S. (1997). *Psychological tests*. Upper Saddle River, NJ: Prentice Hall.
- Cheremie, G. M., Griffin, K. M., & Morgan, T. (2000). Usefulness of assessment techniques in assessing classification for emotional disturbance and generating classroom recommendations. *Perceptual and Motor Skills, 90*, 250-252.
- Dawes, R. M., Faust, D., & Meehl, P. E. (1989). Clinical versus actuarial judgment. *Science, 243*, 1668-1674.
- Deno, S. L. (1985). Curriculum-based measurement: The emerging alternative. *Exceptional Children, 52*, 219-232.

- Eckert, T. L., Hintze, J. M., & Shapiro, E. S. (1997). School psychologists' acceptability of behavioral and traditional assessment procedures for externalizing problem behaviors. *School Psychology Quarterly, 12*, 150-169.
- Faust, D. (1984). *The limits of scientific reasoning*. Minneapolis: University of Minnesota.
- Gittelman Klein, R. (1986). Questioning the clinical usefulness of projective psychological test for children. *Developmental and Behavioral Pediatrics, 7*, 378-382.
- Goh, D. S., & Fuller, G. B. (1981). Current practices in the assessment of personality and behavior by school psychologists. *School Psychology Review, 12*, 240-243.
- Goh, D. S., Teslow, C. J., & Fuller, G. B. (1981). The practice of psychological assessment among school psychologists. *Professional Psychology, 12*, 696-706.
- Hayes, S. C., Nelson, R. O., & Jarrett, R. B. (1987). The treatment utility of assessment: A functional approach to evaluating assessment quality. *American Psychologist, 42*, 963-974.
- Howell, K., & Nolet, V. (1999). *Curriculum-based evaluation: Teaching and decision making*. Pacific Grove, CA: Brooks/Cole.
- Hutton, J. B., Dubes, R., & Muir, S. (1992). Assessment practices of school psychologists: Ten years later. *School Psychology Review, 21*, 271-284.
- Individuals With Disabilities Education Act Amendments of 1997. Pub L No. 105-17.20. 33 U.S.C. § 100 (1997).
- Kavale, K. (1990). Effectiveness of special education. In T. B. Gutkin & C. R. Reynolds (Eds.), *Handbook of school psychology* (2nd ed., pp. 868-898). New York: John Wiley.
- Kennedy, M. L., Faust, D., Willis, W. G., & Piotrowski, C. (1994). Social-emotional assessment practices in school psychology. *Journal of Psychoeducational Assessment, 12*, 228-240.
- Knoff, H. M. (Ed.). (1983). Projective/personality assessment in the schools [Special issue]. *School Psychology Review, 12*(4).
- Knoff, H. M. (2002). Best practices in personality assessment. In A. Thomas & J. Grimes (Eds.), *Best practices in school psychology IV* (pp. 1281-1302). Bethesda, MD: National Association of School Psychologists.
- Kratochwill, T. R., & Shapiro, E. S. (2000). Conceptual foundations of behavioral assessment in schools. In E. Shapiro & T. Kratochwill (Eds.), *Behavioral assessment in schools: Theory, research, and clinical foundations* (2nd ed., pp. 3-15). New York: Guilford.
- Laurent, J., Swerdlik, M., & Handler, J. (1992). Psychological test usage: A survey of internship supervisors. *School Psychology in Illinois, 74*, 8-9.
- Lilienfeld, S. O., Wood, J. M., & Garb, H. N. (2000). The scientific status of projective techniques. *Psychological Science in the Public Interest, 1*, 27-66.
- Lubin, B., Larsen, R. M., & Matarazzo, J. D. (1984). Patterns of psychological test usage in the United States: 1935-1982. *American Psychologist, 39*, 451-454.
- Lubin, B., Wallis, R. R., & Paine, C. (1971). Patterns of psychological test usage in the United States: 1935-1969. *Professional Psychology, 2*, 70-74.
- Marston, D. (1989). Curriculum-based measurement: What is it and why do it? In M. R. Shinn (Ed.), *Curriculum-based measurement: Assessing special children* (pp. 18-78). New York: Guilford.
- National Association of School Psychologists. (2000). *Principles for professional ethics: Guidelines for the provision of school psychological services*. Bethesda, MD: Author.
- Messick, S. (1980). Test validity and the ethics of assessment. *American Psychologist, 35*, 1012-1027.
- Nelson-Gray, R. O. (2003). Treatment utility of psychological assessment. *Psychological Assessment, 15*, 521-531.
- Prout, H. T. (1983). School psychologists and social-emotional assessment techniques: Patterns in training and use. *School Psychology Review, 12*, 377-383.
- Reschly, D. J., & Ysseldyke, J. E. (2002). Paradigm shift: The past is not the future. In A. Thomas & J. Grimes (Eds.), *Best practices in school psychology IV* (pp. 3-20). Bethesda, MD: National Association of School Psychologists.
- Reynolds, W. M. (1979). Psychological test: Clinical usage versus psychometric quality. *Professional Psychology, 10*, 324-329.
- Shapiro, E. S. (2005). *Academic skills problems: Direct assessment and intervention* (3rd ed.). New York: Guilford.

- Shapiro, E. S., & Heick, P. F. (2004). School psychologist assessment practices in the evaluation of students referred for social/behavioral/emotional problems. *Psychology in the Schools, 41*, 551-561.
- Shinn, M. R. (1989). *Curriculum-based measurement: Assessing special children*. New York: Guilford.
- Shinn, M. R. (2002). Best practices in using curriculum-based measurement in a problem-solving model. In A. Thomas & J. Grimes (Eds.), *Best practices in school psychology IV* (pp. 671-698). Bethesda, MD: National Association of School Psychologists.
- Stinnett, T. A., Havey, J. M., & Oehler-Sinnett, J. (1994). Current test usage by practicing school psychologists: A national survey. *Journal of Psychoeducational Assessment, 12*, 331-350.
- Sundberg, N. D. (1961). The practice of psychological testing in clinical services in the United States. *American Psychologist, 16*, 79-83.
- Watkins, C. E., Jr., Campbell, V. L., Nieberding, R., & Hallmark, R. (1995). Contemporary practice of psychological assessment by clinical psychologists. *Professional Psychology: Research and Practice, 26*, 54-60.
- Wilson, M. S., & Reschly, D. J. (1996). Assessment in school psychology: Training and practice. *School Psychology Review, 25*, 9-23.
- Witt, J. C. (Ed.). (1993). In defense of controversy [Special section]. *School Psychology Quarterly, 8*(3), 159-199.
- Wolfe, M. M. (1978). Social validity: The case for subjective measurement or how applied behavior analysis is finding its heart. *Journal of Applied Behavior Analysis, 11*, 203-214.
- Yates, B. T., & Taub, J. (2003). Assessing the costs, benefits, cost-effectiveness, and cost-benefit of psychological assessment: We should, we can, and here's how. *Psychological Assessment, 15*, 478-495.
- Ysseldyke, J., Dawson, P., Lehr, C., Reschly, D., Reynolds, M., & Telzrow, C. (1997). *School psychology: A blueprint for training and practice II*. Bethesda, MD: National Association of School Psychologists.