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THE NATIONAL RESEARCH CENTER ON THE GIFTED AND TALENTED

The University of Connecticut
The University of Georgia
The University of Virginia
Yale University

A New Window for Looking at Gifted Children

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Athens, Georgia

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ABSTRACT

This research edition of a *New Window for Looking at Gifted Children, A Guidebook* was developed by researchers at The University of Georgia to assist school districts in their implementation of a plan to identify gifted students who come from economically disadvantaged families and areas and who have limited proficiency in the English language. Seven basic assumptions underlie the Staff Development Model (SDM) and the Research-Based Assessment Plan (RAP) that provide the foundation for this guidebook.

1. Giftedness is a psychological construct that cannot be measured directly. We infer giftedness by observing certain characteristics or behaviors of individuals (Hagen, 1980).
2. There are certain fundamental and identifiable traits, aptitudes, and behaviors (TABs) that underlie the giftedness construct.
3. These TABs represent basic characteristics of gifted performance and can be recognized in the performance of children, within and across diverse cultural groups and at various social and economic levels.
4. The TABs that underlie the giftedness construct should provide the basis for methods used to seek referrals from educators, parents, and others who are involved in recommending children for participation in programs designed for the gifted.
5. The TABs that underlie the giftedness construct should provide the basis for selecting the measures to be used in determining needs for children referred for gifted program services.
6. The TABs that underlie the giftedness construct should provide the basis for designing programs and developing curricula to address the needs of children identified to participate in gifted programs.
7. The TABs that underlie the giftedness construct should provide the basis for designing methods to evaluate student performances in gifted programs as well as the effectiveness of programs designed to meet the needs of gifted children.

The research project at The University of Georgia was specifically designed to address issues related to the underrepresentation of economically disadvantaged and limited English proficient students in gifted programs. The focus was on children in these groups who were not currently participants in programs for gifted children but might be if more effective methods were used to recognize their gifted potential.

There are three basic assumptions underlying this project.

1. There are significant numbers of economically disadvantaged and limited English proficient students who do not meet traditional criteria for gifted programs but who are believed to possess significant cognitive, motivation, artistic, or creative potentials that would enable them to successfully participate in programs designed to develop and nurture gifted behaviors.
2. The demonstration of gifted behaviors by children from economically disadvantaged backgrounds and by children who have limited proficiency in the English language would be affected by the sociocultural context in which they develop, but would not necessarily be limited by interpretations within that context.
3. The search for a paradigm to guide the identification of the gifts and talents of children from economically disadvantaged backgrounds and by children who have limited proficiency in the English language must be embedded within their sociocultural and economic context.

This guidebook includes the basic information needed by a session leader to train educational personnel in techniques for observing gifted characteristics in diverse population groups. To make optimal use of this guidebook, the following steps are recommended:

1. Thoroughly read Parts I and II.
2. Review carefully all information sheets. Reword information on these sheets to fit local requirements.
3. Prepare handouts and transparencies.
4. Schedule times and places for staff development meetings with appropriate school officials.
5. Arrange meetings with leadership team members to plan staff development sessions.

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PART I: A Comprehensive Overview of the Staff Development Model (SDM) and the Research-Based Assessment Plan (RAP)

After reading this section the reader will understand the:

- **history and development of the SDM and RAP.**
- **components of the SDM.**
- **components of the RAP.**
- **roles and responsibilities of the persons involved in implementing the SDM and the RAP.**

The SDM

What is the SDM?

The SDM is a comprehensive training model designed to provide educators with:

- background information on giftedness as a psychological construct.
- an understanding of basic traits, aptitudes, and behaviors (TABs) associated with the giftedness construct.
- instructions for observing TABs in diverse population groups.
- a procedure to determine which students should have further assessment for participation in gifted programs.

History and Development of the SDM

The idea for this staff development training model grew out of the instructions for implementing the *Frasier Talent Assessment Profile* (*F-TAP*) where it was suggested that:

- no nominations are made until each potential nominator has been involved in inservice sessions.
- all nominators should receive information on the school districts for:

  (a) statements of equity and philosophy, definition of giftedness
  (b) identification procedure;
  (c) type of student sought; and
  (d) behavioral indicators of potential for gifted performance in the target populations.

New materials generated during previous stages of the NRC/GT research project at The University of Georgia were added to the original model to create this current SDM model. Based on literature reviews, a series of ten traits, aptitudes, and behaviors (TABs) were identified as relevant attributes of the giftedness construct. The definition of these TABs became the relevant indicators of gifted performance. Teachers learned how to recognize these indicators during the piloting of the SDM. Sample case descriptions of research subjects and vignettes developed by teachers became real life examples that could readily be observed in various sociocultural and environmental contexts.

The Talents, Abilities, and Behaviors (TABs)

The ten TABs proposed as basic attributes of the giftedness construct are:

Interests	intense (sometimes unusual) interest
Motivation	evidence of desire to learn
Humor	conveys and picks up on humor
Problem-Solving Ability	effective (often inventive) strategies for recognizing and solving problems
Inquiry	questions, experiments, explores
Memory	large storehouse of information on school or non-school topics
Imagination and Creativity	produces many ideas; highly original
Insight	quickly grasps new concepts and makes connections; senses deeper meanings
Reasoning	logical approaches to figuring out solutions
Communication Skills	highly expressive (with words, numbers, or symbols)

Panning for Gold Forms

Using *Panning for Gold* as a theme, several forms were developed to facilitate observations for the TABs as they were exhibited by children in various classroom settings. The *Panning for Gold TABs Descriptors* (Part IV.1) provide a definition, a general description, and examples of how a TAB might look when exhibited by children. The *Panning for Gold Observation Sheet* (Part IV.3) is the form on which teachers record their observations. Once observations are complete, referrals of students for further assessment are made using a *Panning for Gold Student Selection Sheet* (Part IV.4). Finally, a *Panning for Gold Student Referral Form* (Part IV.5) is completed for each referred student.

The RAP

What is the RAP?

The RAP is an identification system designed to facilitate the collection and interpretation of data from a variety of sources when assessing children's gifts and talents. The RAP was piloted in five school districts in Georgia and one in North Carolina during the 1991-1992 school year. The *Frasier Talent Assessment Profile* (*F-TAP*) provided the basic structure for the RAP.

Components of the Frasier Talent Assessment Profile (F-TAP)

Phase I **Referral**—the process by which students are nominated to participate based on observations made by teachers i.e., TABs summary.

Phase II **Assessment**—the process used to obtain data from different measurement sources that are matched to evaluate various aspects of the TABs which are then displayed on the *F-TAP.*

Phase III **Recommendation**—a committee based procedure that evaluates student profiles obtained from the completed *F-TAP* and makes placement decisions.

Phase IV **Educational Planning**—individualized curricula, programming and counseling developed for each student based on the rich data obtained during the assessment phase.

Personnel to Implement the SDM and the RAP

An integral part of implementing the SDM and the RAP is the participation of teachers, administrators, students, and parents. Persons involved should therefore represent the broad spectrum of the school community and assume responsibilities for the following:

Teachers:

Observe and refer students.
Communicate with parents.

Administrators:

Provide release time for teachers.
Facilitate SDM sessions.
Communicate with parents, teachers, the community, and the Board of Education.
Arrange for resources and materials.

G/T Coordinators:

Conduct needs assessment.
Provide SDM training.
Establish and instruct committees.
Communicate with school, parents, and other community personnel.
Secure appropriate approvals.
Coordinate development of program, curricula, counseling, and evaluation.

Personnel to Implement the SDM and the RAP (continued)

Committees:

Determine district philosophy and definition of giftedness.
Determine assessment procedures and measures to be used.
Make placement recommendations.
Handle appeals.

Students:

Participate in the referral and assessment process in a timely fashion.

Parents:

Provide support and encouragement.
Participate in referrals.
Give permission for participation.

PART II: Instructions for Implementing the SDM and the RAP

After reading this section, the reader will understand:

- **preliminary steps to be accomplished before initiating the SDM and the RAP.**
- **scheduling tasks.**
- **how to implement the SDM.**
- **how to implement the RAP.**

SECTION A: PRELIMINARY STEPS

Committees

Step 1.

It is important to involve various persons from the school community on committees to assist in the implementation of the SDM and the RAP. Two types of committees are recommended.

District-Wide Committee

District-Wide Committee

a. This committee should reflect a variety of school positions, e.g., central office administration, local school administrators, persons trained in gifted education, classroom teachers, and support personnel such as counselors and media specialists.

b. Responsibilities of this committee would include developing the school district's philosophy for gifted programs and statement of equity, planning and monitoring the implementation of the identification procedures, certifying recommendations for student placement, making decisions regarding the design of the program and curriculum, handling appeals, and making modifications based on the information during formative and summative evaluations.

c. This committee should serve year round and appropriate arrangements should be made for release time.

School-Based Committee

School-Based Committee

a. A school-based committee should be established at each school in the district. The teacher for the gifted and the principal should select members for this committee.

b. A minimum number of three people and a maximum number of seven is suggested.

c. The committee should be chaired by the teacher of the gifted.

d. This committee should include a broad representation of program area teachers, e.g., subject area, special education, Title I, and bilingual.

e. Responsibilities would include collecting all referral and assessment information, recording data on the profile, and making initial interpretation and placement recommendations.

Both committees serve important roles in implementing the SDM and the RAP. They provide the best way to encourage support for gifted programs and advocacy on behalf of bright children from diverse backgrounds.

Develop a Statement of Equity ***(Resource Sheet, Part III.1)***

Step 2.

The goal of the statement of equity is to emphasize the school district's commitment to looking for giftedness in all children, regardless of race, ethnic background, gender, national origin, or economic level. It is the primary responsibility of the district-wide committee to develop this statement.

Develop a Philosophy ***(Resource Sheet, Part III.2)***

Step 3.

The statement of philosophy. Such a statement provides the framework for program development and continuation. It expresses the means for the school to accommodate gifted students within its overall commitment to provide appropriate educational services for all students. The district-wide committee should develop the philosophy statement.

Develop a Definition ***(Resource Sheet, Part III.3)***

Step 4.

It is important to determine how the concept of giftedness is operationalized in your school district. This process would include examining the state's definition of giftedness, reviewing literature on giftedness to ensure inclusion of current concepts, and interpreting these findings in the context of the school district and the populations that it serves. It is recommended that the district-wide committee develop this definition.

Determine Target Population

Step 5.

It is necessary for the district-wide committee to determine which population of students will be the focus of the identification process. However, for the purposes of this project the target population will be gifted children from economically disadvantaged and limited English proficient backgrounds.

Schedule Pre-Planning ***(Resource Sheets Part III.1)***

Step 6.

Plans should be made ahead of time to schedule activities in order to effectively implement the SDM and the RAP. Tasks that need to be planned include:

a. Obtaining appropriate approvals from key organizations, e.g., the state department of education, and the local board of education.

b. Reviewing the school calendar to avoid scheduling conflicts with holidays, district-wide testing, field trips, school and district inservice meetings.

c. Developing schedules for staff development and assessment activities.

SECTION B: IMPLEMENTING THE SDM

Traditional and Proposed Paradigms

Step 1.

Present background theoretical information.

a. Explain the traditional paradigm (see Resource Sheet, Part III.5 and Figure 1) used to identify gifted children. The purpose is to help teachers understand the identification model that has been applied in gifted education.

b. Present the proposed paradigm (Figure 2.) Include a discussion of giftedness as a construct. This activity will help teachers understand the manner in which giftedness may be manifested in diverse populations and in different types of gifted children.

Panning for Gold TABs Descriptor Form *(Master Copies for Transparencies and Handouts, Part IV.1)*

c. Introduce the traits, aptitudes, and behaviors (TABs) associated with the giftedness construct as used in this project. The purpose of this discussion is to help teachers understand the relationship that should exist between the definition of giftedness and the related operational terms.

Step 2.

Introduce case study descriptions of students.

Sample Case Studies *(Master Copies for Transparencies and Handouts, Part IV.2)*

a. Present sample case studies describing bright students from the target populations. This will provide teachers with real life examples that show how the TABs are manifested in a variety of ways. It will provide a stimulus for them to think of examples of students with whom they have worked.

b. Encourage teachers to provide examples from their classroom experiences. This will assist them in applying the TABs to students in their school context.

Step 3.

Introduce the procedure for observing students.

Panning for Gold Observation Sheet (*Master Copies for Transparencies and Handouts, Part IV.3)*

a. Explain the *Panning for Gold Observation Sheet*. The purpose is to help teachers understand how to use this sheet to record observations of students as they relate to the TABs. Format should enable teachers to recall what the observed behavior was and who the student was, in order to assist the teachers during the nomination phase.

b. Encourage teachers to offer suggestions that will make the recording of observations manageable for them. Suggestions might include ideas about when to observe, when to record observations, where to observe (e.g., in the classroom, on the playground, when students are in the media center.)

c. Explain to teachers that they should not be overly concerned with whether the student is a member of whatever target group has been designated for emphasis. Procedures for selecting target students for referral is explained in Step 4.

d. Explain the details of the observation schedule. Include when the observations should begin, when they should be completed, where to turn them in, etc.

Step 4.

Introduce the *Panning for Gold Observation Sheet* at a meeting of the school-based committee.

a. After collecting the *Panning for Gold Observation Sheets*, the school-based committee must then determine which students fit the target population. The *Panning for Gold Student Selection Sheet* is used to determine students to be referred for assessment.

b. The school-based committee should gather additional information from teachers if needed to make selection decisions.

Panning for Gold Student Selection Sheet
(Master Copies for Transparencies and Handouts, Part IV.4)

Step 5.

Present the *Panning for Gold Selection Sheet*. The purpose will be to let teachers know how their observations will be processed.

a. Explain the *Panning for Gold Selection Sheet*. The purpose is to let teachers know the process that will be followed by the school-based committee to select students for referral.

b. Explain the *Panning for Gold Student Referral Form*. Teachers need to know that they will be asked to rate students on each of the TABs and provide an example of the behavior (from the observation sheet).

Panning for Gold Student Referral Form
(Master Copies for Transparencies and Handouts, Part IV.5)

c. The school-based committee should develop and implement its plan to provide information about its decisions to the teachers.

Step 6.

Panning for Gold Student Referral Forms

a. The school-based committee disseminates referral forms to teachers of referred students.

b. The school-based committee provides instructions for completing the referral form and the schedule for completion and return of the form.

c. The school-based committee records the referral information on the *F-TAP*.

SECTION C: IMPLEMENTING THE RAP

Preliminary Steps

Step 1.

There are several activities that should be completed by the district-wide committee prior to implementing the RAP. These activities could be planned before beginning the SDM process.

(See Resource Sheets 6-15 for supplementary information on selecting tests and plotting data.)

Decide on, and order or prepare measures that will be used to assess students for participation in the gifted program. The following points must be considered when selecting assessment measures:

a. Measures selected must be related to the traits, aptitudes, and behaviors associated with the giftedness construct as operationalized in this project.

(See Appendix A for listing of tests and other measures.)

b. Measures that provide both subjective and objective data must be used.

c. Determine what information from each measure will be recorded in the process/performance section or the advocacy information section.

d. Decide how assessment measures will be scored.

e. Develop or secure necessary forms to allow students to be tested.

Frasier Talent Assessment Profile (F-TAP)
(Master Copies for Transparencies and Handouts, Part .6)

f. The *F-TAP* must be used to display data collected during the identification process. After minimum assessment measures have been decided they should be placed on the *F-TAP*.

g. No recommendation may be made about student participation until the data collection process is completed. All data must be considered in the evaluation of students.

h. The minimum information to be collected on all referred students should be determined. In addition, the committee should decide on additional information that may be collected and identify the sources to be used.

i. The committee must remain aware that data collected to recommend students for placement are also to make curriculum decisions.

Evaluate Information Collected on Students

Step 2.

Decide how information will be evaluated to arrive at recommendations regarding placement. The district-wide committee should keep in mind the statement of equity, the definition of giftedness being used, and the statement of philosophy. The following points should be considered when deciding

a. *Do not set a cut-off score*. Instead, determine the range within a minimum number of indicators must fall on the process/performance section.

b. The guiding principle should be "Considering the philosophy and curriculum of the gifted program, will placement in the gifted program meet the educational needs of this student?"

c. Determine the minimum number of indicators from your test instrument that should appear in this range. Some of the indicators may not be in this specified range, but that is okay. List instrument/item on "x" line and score in the appropriate column to the right, then connect up to scale.

d. Determine how the information recorded in the advocacy information section will be interpreted.

Make Recommendations for Program Services

Step 3.

Decide recommendation levels. The following are suggested:

a. **Yes**, if the required number of indicators fall in the specified range and if the **advocacy information** and the **referral information** support this recommendation.

b. **Not at this time**, if few of the indicators fall in the specified range and the **advocacy information** and **referral information** are not sufficiently strong to recommend services in a gifted program.

c. **Gather additional information**, if a clear decision cannot be made, then collect additional information according to the procedures established in Section B.

Assessment and Recording Stage

Step 1.
Administer measures to referred students according to the time schedule set.

Distribute F-TAPs to School-Based Committees

Step 2.
Initiate the scoring of instruments.

Step 3.
Plot results on the *F-TAP.*

Committee Recommendations

Step 1.
The school-based committee schedules a meeting to evaluate profiles and make initial recommendations for placement.

Step 2.
The school-based committee submits the profiles with recommendations for placement.

Step 3.
The district-wide committee reviews and certifies recommendations.

Step 4.
The district-wide committee provides information to the schools when certification process is completed.

Notification Stage

Step 1.
The district-wide committee prepares appropriate due process forms for dissemination to parents.

Looking Ahead
Resource Sheets Part III.15-16)

Step 2.
The district-wide committee completes any required district and/or state paperwork.

Attention should be given to how identification information will be used in planning appropriate programs, curricula, and evaluation. Attention should also be given to students who were referred but were not selected for gifted program services.

PART III: Resources

After examining this section the reader will:

- **understand the development of statements of philosophy, definition, and equity.**
- **understand a conceptual framework of giftedness.**
- **become familiar with various assessment instruments.**
- **be able to facilitate program decisions in identification, placement, and program modification.**

Resource Sheet #1

Statement of Equity

Serious consideration should be given to establishing a statement of equity. Equity means "justice; impartiality; the giving or desiring to give to each man his due" (McKechnie, 1983, p. 618). Excellence means "the state of possessing good qualities in an unusual or eminent degree; the fact or condition of excelling in anything; superiority; any valuable quality; something in which a person or thing excels; anything highly laudable, meritorious, or virtuous in persons, or valuable and esteemed in things" (McKechnie, 1983, p. 636).

Oftentimes, in gifted education these two terms become confused. Equity merely means that you will look for indicators of giftedness in all children, regardless of race, gender, national origin, or economic level. Standards of excellence guide that search. The goal is to seek those qualities that exist in an unusual or eminent degree. This requires that no a priori notion exists regarding who can or cannot possess these qualities denoting excellence; the search for these qualities must take place in everyone.

The district-wide committee must develop a statement of equity. This sets the stage for anything that follows. A procedure that has proven successful is to begin by having people brainstorm all the things they can think of or have heard people say about children who should be in gifted programs. Then, ask them to consider all the things they can think of or have heard people say about children who should not be in gifted programs. Push people to think of the most extreme thoughts they can because it is important that all myths, perceptions, and truths be revealed.

After generating the lists, discuss each item and try to determine whether it has anything to do with whether a person can be gifted or not. When finished, the group has a list of those items or descriptors that are relevant to giftedness; these items serve as a foundation for establishing a statement of equity. The statement developed should not contain any mythical or perceptive barriers that would prevent a child from being considered for participation in a gifted program.

Develop a statement of safeguards to ensure equity. The best intentions must be ensured. A good way to do this is to think of those things that may not happen according to plans and devise ways of handling them. The following approach has been found to be useful. When there are limited nominations of students from low socioeconomic and minority groups, the district-wide committee must use all its power to encourage a more comprehensive search. When these powers have become exhausted, it then becomes the responsibility of the superintendent and/or the Board of Education to require that school personnel use further means to elicit referrals of students from these groups. The goal should be evident that the school system is committed to equity in finding potentially gifted students; this goal is nonnegotiable.

Resource Sheet #2

Develop a Philosophy

The glue that holds gifted programs together is the statement of philosophy. Such a statement provides the framework for program development and continuation. It expresses a means for the school to accommodate gifted students within its overall commitment to provide appropriate educational services for all students.

It is suggested that the development of the philosophy be the task of the district-wide committee. When this committee articulates the rationale for a gifted program, the first major step has been taken toward establishing a strong foundation for the program within the school's operating policies.

Strongly recommended are the guidelines found in *Providing Programs for the Gifted and Talented: A Handbook* (Kaplan, 1974, pp. 26-31). She defines a statement of philosophy as the result of integrating values, learning principles, and personal and social needs. She concludes that formulating a program without synchronizing purpose with practice is much the same as performing a ritual without understanding the reason for the ritual. The philosophy is the benchmark against which decisions about program participants and provisions are made.

School districts might also secure copies of philosophies from other programs to review. There is no need to reinvent the wheel; if there are statements already developed that express the goals one has in mind, use them.

Resource Sheet #3

Develop a Definition

It is important to define what potentially gifted means for a school or school system. The first thing that one should do is to secure the state's definition of giftedness. For example, in the state of Georgia the definition is:

The gifted student is one who demonstrates a high degree of intellectual ability and who needs special instruction and/or ancillary services in order to achieve at levels commensurate with his/her intellectual ability. (Georgia Department of Education, Regulations, and Procedures, 1986)

Study the state's definition of giftedness and fully explore what it means. It is here that the group leader must present to the group the best and most current findings on the concepts included in the definition. For example, to fully understand what is meant by intellectual ability, review the best findings on intelligence (Cattell, 1971; Clark, 1988; Gardner, 1983; Sternberg, 1982). In each of these discussions you will find thoughts that describe intelligence and intellectual ability as a complex, multidimensional function consisting of a variety of skills and abilities. These discussions reflect what Gallagher and Kinney (1974) proposed as mental traits held in common by all persons of extraordinary gifts and talents.

1. The ability to meaningfully manipulate some symbol system.
2. The ability to think logically, given appropriate data.
3. The ability to use stored knowledge to solve problems.
4. The ability to reason by analogy.
5. The ability to extend or extrapolate knowledge to new situations or unique applications.

Usually, state definitions are meant as guidelines not mandates. The intent of this discussion is to explore the total meaning of a state's definition, find a common meaning that is understood at the local school level, and become sensitive to factors that should be reviewed.

Review those behaviors that characterize the type of students referred to in the definition. It is important to understand these characteristics in relation to the students in your school system. Hagen (1980) offers a very useful list of behaviors. In addition, a review should be made of discussions of characteristics in different cultural and ethnic groups at different social and economic levels as related to the definition.

Resource Sheet #4

Recommended Timeline

Timely events need to be addressed in the implementation of the SDM and the RAP. In the development of a local implementation plan, several factors must be considered. These factors are:

- necessity of establishing support and gaining appropriate approvals
- time required to evaluate and select instrumentation
- awareness of school schedules and activities
- sufficient time needed by teachers to make observations
- time needed to conduct assessments

The following is a recommended timeline:

September: Discuss project requirements with appropriate staff.
Plan for implementation.

October: Establish site-based teams.
Conduct SDM sessions.

November: Begin instrument selection.
Submit reporting forms.
Acquire needed instruments.
Schedule data collection.

December: Provide status reports to various audiences.

January: Begin assessments.

February: Continue assessments.

March: Complete student *F-TAPs*.

April: Schedule site-based committee meeting to determine placement.

Resource Sheet #5

Proposed Paradigm

Current *research findings* characterize giftedness as a complex, multifaceted phenomenon yet more traditional and current *practices* across the nation define and look for giftedness through the dominant use of intelligence and achievement scores (Alvino, McDonnel, & Richert, 1982; Gardner, 1983; Renzulli, 1978; Sternberg, 1986; Treffinger & Renzulli, 1986). This suggests two discrepant paradigms. A paradigm is defined as a conceptual framework from which actions, carried out by individuals and/or institutions, follow. The two suggested discrepant paradigms are (1) one based on the traditional view of giftedness and (2) another that embraces a more current, expanding view of giftedness.

Traditional Paradigm. The traditional view of giftedness is graphically depicted in Figure 1. The center of this paradigm, the inner circle, suggests that giftedness is a static and closed phenomenon and that students must "fit" this definition. For example, in some states, giftedness is a score at the 99th percentile on a standardized measure of mental ability. The outer circle in this paradigm, designated A, B, . . . Z, represents the various student groups to be accommodated by this definition. The various groups include the culturally diverse, economically disadvantaged, bilingual, and rural gifted. Various alternative methods used are represented by the arrows pointing toward the center circle.

Proposed Paradigm. The proposed paradigm (see Figure 2), however, takes a dynamic view. This dynamic view is based on the belief that giftedness is a construct. A construct is a psychological concept that is not itself, directly measurable, but believed to be inferred (Hoge, 1988, 1989). Defined as a construct, the inference of giftedness then is carried out through the observation and measurements of traits, aptitudes, and behaviors believed to demonstrate giftedness.

The first feature in the proposed paradigm is the definition of giftedness as a construct, represented by the central circle. Here giftedness is defined as a broad, universal set of traits, aptitudes, and behaviors. The second feature is the differing sociocultural contexts in which gifted students are found. These differing contexts are represented by the external geometric shapes. The third feature is the idea that factors found in these differing sociocultural contexts impact the manifestation of giftedness thereby influencing the way giftedness is identified. This feature is represented through the elliptical path between the central and external figures. The reciprocal influence, between various contexts and universal definition, is characterized by the elliptical path and illustrates the dynamic nature of giftedness. By also considering how giftedness is exhibited and valued in other contexts, this results in the refinement of understanding the giftedness construct and in the methods employed to identify giftedness.

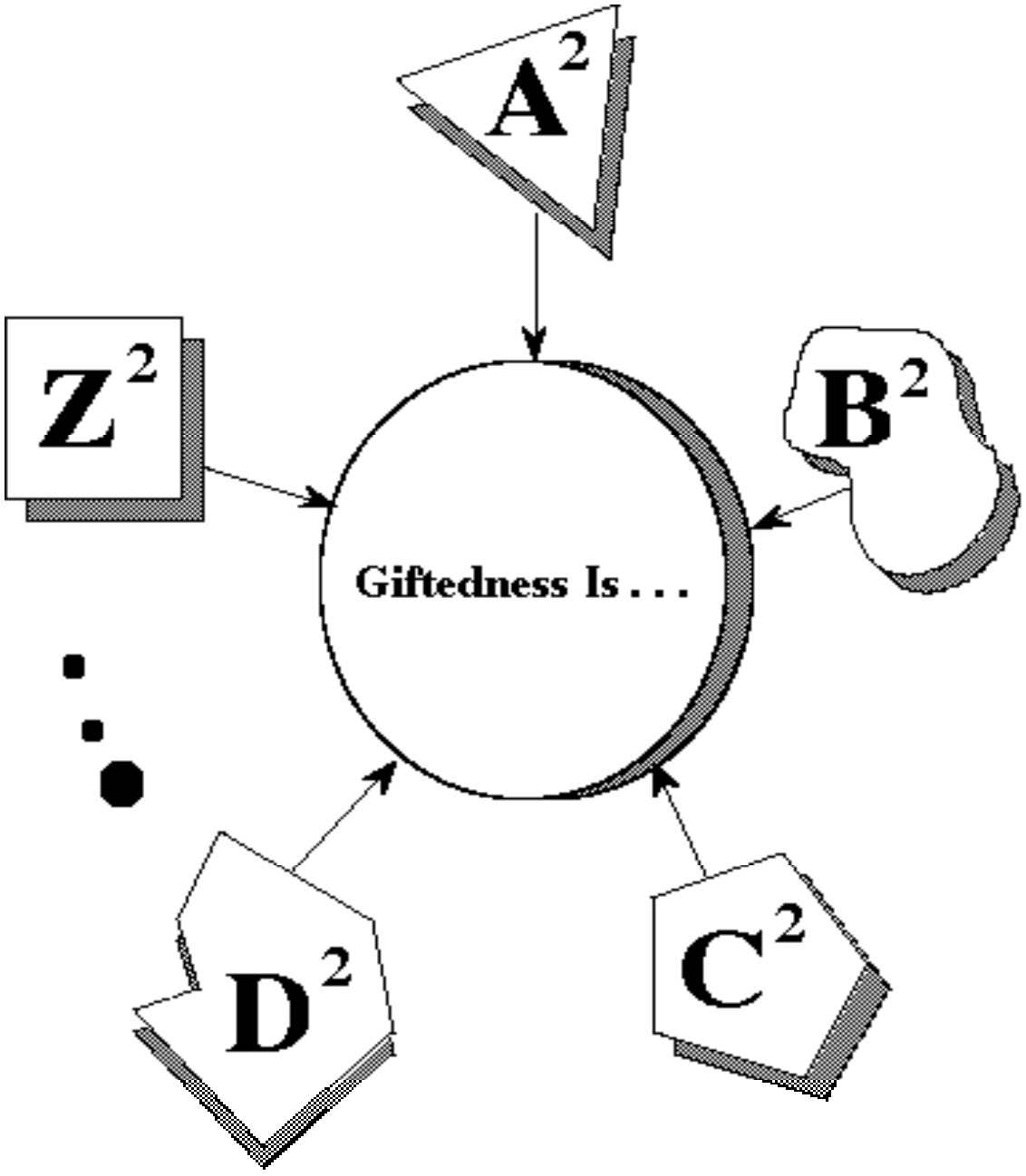


Figure 1. A traditional paradigm of giftedness.

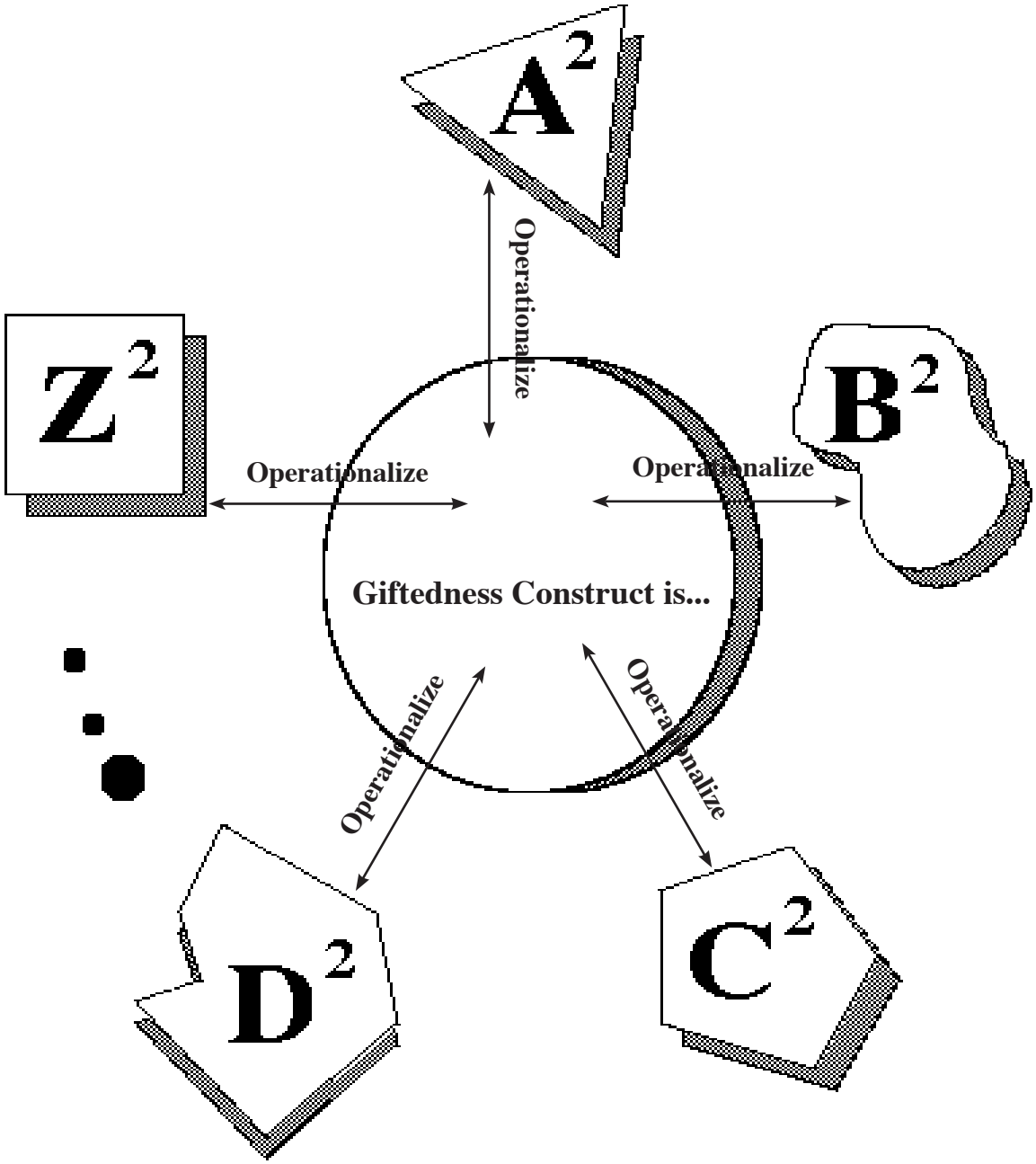


Figure 2. A proposed paradigm of giftedness.

Resource Sheet #6

Sources for Selecting Measures

All available sources for tests and non-tests should be searched. Some useful sources are:

Educational Testing Service. (1986). *The ETS test collection catalog: Vol I. Achievement test and measurement devices*. Princeton, NJ: Author.

Goldman, B. A., & Osborne, E. L. (Eds). (1985). *Directory of unpublished experimental measures*. New York: Human Sciences Press.

Karnes, F. A., & Collins, E. C. (1981). *Assessment in gifted education*. Springfield, IL: Charles C. Thomas.

Mitchell, J. V., Jr. (Ed.). (1983). *Tests in print III*. Lincoln, NE: Buros Institute of Mental Measurements.

Mitchell, J. V., Jr. (Ed.). (1985). *The ninth mental measurements yearbook*. Lincoln, NE: Buros Institute of Mental Measurements.

Richert, E. S., Alvino, J. J., & McDonnel, R. C. (1982). *National report on identification: Assessment and recommendations for comprehensive identification of gifted and talented youth*. Sewell, NJ: Educational Improvement Center—South.

Sweetland, R. C., & Keyser, D. J. (Eds.). (1986). *Tests: A comprehensive reference for assessments in psychology, education, and business* (2nd ed.). Kansas City, MO: Test Corporation of America.

Resource Sheet #7

Matrix of Measures Related to TABs

The measures contained on this matrix are not exhaustive. Their inclusion on the list does not constitute a recommendation of the test.

Traits, Aptitudes, and Behaviors	Test	Age Range	Publisher Address
• Problem Solving • Insight • Reasoning • Imagination • Creativity	• Developing Cognitive Abilities Test (D-CAT)	Grades 1-12	American Testronics Chicago, IL
• Reasoning	• Bracken Basic Concepts Scale	Grades K-1	Charles Merrill Co. 1300 Alum Creek Rd. Columbus, OH 43216
• Motivation	• Children's Academic Intrinsic Motivation Inventory (CAIMI)	Grades 4-8	Psychological Assessment Resources P.O. Box 98 Odessa, FL 33556
• Interests	• Dimensions of Self Concept (DOSC)	Grades 4-College	Edits P.O. Box 7234 San Diego, CA 92107
• Interests • Reasoning • Problem Solving • Memory	• Educational Development Series	Grades K-12	Scholastic Testing Inc. P.O. Box 1056 Bensenville, IL 60106
• Imagination & Creativity	• Gifted Evaluation Scale (GES)	Grades K-12	Hawthorn Educational P.O. Box 7570 Columbia, MO 65205
• Communication	• Group Achievement Identification Measure (GAIM)	Grades 5-12	Educational Assessment Services W. 6050 Apple Rd. Waterton, WI 53094
• Interest • Inquiry • Imagination & Creativity	• Group Inventory for Finding Creative Talent (GIFT)	Grades K-6	Educational Assessment Services W. 6050 Apple Rd. Waterton, WI 53094
• Interest • Imagination & Creativity • Inquiry	• Group Inventory for Finding Interests (GIFFI)	Grades 6-12	Educational Assessment Services W. 6050 Apple Rd. Waterton, WI 53094

Resource Sheet #7 (continued)

Traits, Aptitudes, and Behaviors	Test	Age Range	Publisher Address
• Problem Solving • Insight • Reasoning • Memory	• Kaufman Assessment Battery for Children (K-ABC)	Ages 2.5 years-12.5 years	American Guidance Society Publisher's Building Circle Pines, MN 55024
• Insight • Reasoning • Problem Solving	• Matrix Analogies Test (MAT)	Ages 5 years-17 years	Charles Merrill Co. 1300 Alum Creek Rd. Columbus, OH 43216
• Problem Solving • Memory • Insight • Reasoning	• National Achievement Test (NAT)	Grades 1-12	American Testronics Chicago, IL
• Reasoning	• Peabody Individual Achievement Test-Revised (PIAT-R)	Grades K-12	American Guidance Society Publisher's Building Circle Pines, MN 55024
• Motivation	• School Attitude Measure (SAM)	Grades 1-12	American Testronics Chicago, IL
• Problem Solving • Insight • Reasoning • Memory	• Stanford-Binet Intelligence Scale-4th Ed.	Ages 2 years-16 years	Riverside Publishing 8420 Bryn Mawr Ave. Chicago, IL 60106
• Communication • Imagination & Creativity	• Thinking Creativity in Action and Movement (TCAM)	Grades K-Adult	Scholastic Testing Inc. P.O. Box 1056 Bensenville, IL 60106
• Communication • Humor • Imagination & Creativity	• Torrance Tests of Creative Thinking (TTCT)	Grades K-Adult	Scholastic Testing Inc. P.O. Box 1056 Bensenville, IL 60106
• Problem Solving • Insight • Reasoning • Memory	• Wechsler Intelligence Scales for Children (WISC-R)	Ages 6 years-16 years & 11 months	The Psychological Corp. 555 Academic Court San Antonio, TX 78204
• Motivation	• Young Children's Academic Intrinsic Motivation Inventory (Y-CAIMI)	Grades 1-3	Psychological Assessment Resources P.O. Box 98 Odessa, FL 33556

Resource Sheet #8

Issues to Consider When Assessing Students From Diverse Backgrounds

Cultural differences related to behavior, cognitive style, and learning style can work against the identification of children from diverse backgrounds. Some behavior, such as cooperative behavior in completing academic task, is often viewed as laziness or academic inferiority by teachers (Delgado-Galtan & Trueba, 1985). Cognitive styles that are in conflict with those represented in classrooms in the United States further add to the perception that children from minority groups are not "good students" (Ramírez, Herold, & Castañeda, 1974). Manifestation of characteristics associated with giftedness may be different in minority children, yet educators are seldom trained in identifying those behaviors in ways other than the way they are observed in the majority culture.

Language is perhaps one of the greatest issues in the assessment of children from diverse backgrounds for gifted programs. Taylor (1990) suggested that language is a great determiner of the perception of ability about an individual. As such, he suggests that little knowledge, sensitivity, or appreciation of diverse communication styles can result in inappropriate assessment. For children whose first language is not English, observed scores are at times the result of lack of experience with English rather than lack of comprehension of ideas and concepts (de Bernard, 1985). Likewise, code-switching or the mixing of two languages when speaking, is often viewed negatively when it may be an effective way of communicating a specific idea. A pragmatic analysis of the child's language production (Damico, 1985), either written or oral (dictated), may also assist in the interpretation of data collected. An understanding of this may be useful when assessment process includes writing samples, standardized intelligence test scores which were verbally loaded, and/or achievement subtests with strong language dependent components.

Cognitive style is another culture bound attribute. Field dependent sensitivity, as well as other aspects of cognitive style, were examined by Ramírez and Castañeda (1974). Their research suggests that the teaching styles used in the classroom may not be in congruence with the cognitive styles of students. Beyond having implications for classroom practices, this body of research has implications for assessment. If an instrument requires the use of a particular cognitive style and the cognitive style of the child is different, observed scores may be skewed. Determining aspects of the cognitive style of children may provide a context from which to interpret standardized test scores. Ramírez and Castañeda (1974) provide rating forms for the observation of field independent and field sensitive behaviors in children. The use of these or other measures should be an integral part of the assessment of minority children for gifted programs.

Resource Sheet #9

Establishing Inter-Rater Reliability

Inter-rater reliability is the form of reliability that seeks to establish agreement between individuals who are scoring data pieces. When a measure does not have scaled response options such as true-false or multiple choice, it is essential to establish inter-rater reliability. This is done to ensure that the ratings by different individuals remain the same across cases. For example, if inter-rater reliability has been established in the scoring of writing samples, you would expect that the scores of a given piece would be the same in most if not all cases. As a result of developing inter-rater reliability, subjectivity is limited.

Inter-rater reliability is essential if more than one individual is to be involved in the scoring of data pieces. Without inter-rater reliability data from non-scaled measures is unusable.

To establish inter-rater reliability follow these guidelines.

1. Have raters independently score 5 or 10 randomly selected data pieces.
2. Chart scores on each data piece.
3. Identify the response items on which everyone agrees.
4. Discuss why each individual scored response items differently; reach consensus on interpretation.
5. Score another set of 5 or 10 samples.
6. Repeat steps 2 to 5 until each individual is in agreement on at least 90 percent of the items 90 percent of the time.

Several hours should be allowed to establishing inter-rater reliability. One should expect that the initial data set will have divergent ratings. As subsequent sets are rated, agreement will increase. If long periods of time elapse between scoring sessions, it is necessary to reestablish inter-rater reliability.

Resource Sheet #10

Creativity

Purpose

Creativity has long been considered a possible indicator of gifted behavior. The ability to perceive things in a new or different way is an indication of divergent or productive thinking. Assessing a student's creative ability is one way of indicating his/her gifted potential. Consideration must be given to the cultural perspective of the target population when selecting creativity measures. Some require the student to be highly verbal in English, while others may indicate the student's visual/spatial ability. The program philosophy must also be considered when deciding the extent to which creativity will appropriately identify students for the program.

Measures to Consider

The *Torrance Tests of Creative Thinking* (*TTCT*) is a way to measure the creative functioning of an individual. This measure is available in either verbal or figural forms and can be administered from kindergarten to adult. The *TTCT* is norm-referenced by age and discloses scores on originality, fluency, elaboration, resistance to premature closure, abstractness of titles, as well as criterion-referenced creative strengths and a total score. Divergent thinking abilities are indicated by scores on originality, resistance to premature closure, and some of the criterion-referenced creative strengths. Higher level thinking skills are indicated by the abstractness of titles and some of the criterion-referenced creative strengths.

Resource Sheet #11

Writing Samples

Purpose

Writing is regarded as a dimension of communication. The writing ability of a student can be used as an indicator of gifted potential. Being able to think creatively, possessing a high level of language development, the ability to generate original ideas and solutions, and flexible and abstract thought processes are a few characteristics of giftedness that may be manifested in a student's writing sample.

When deciding what measure to use in evaluating writing samples consideration must be given to the cultural perspective of the target population. Each school must decide what is important in the evaluation of writing samples. Based on the student population served, the focus may be on the content of what is written, the ideas conveyed to the reader, or the grammar and use of formal English.

Measures to Consider

The *Children's Language Usage Evaluation Scale* (*CLUES*) is the research edition of a measure that assesses the ability to communicate and organize written responses that demonstrate an understanding of relationships among people, objects, and events. The research edition is available from The University of Georgia. These may include expressions of feelings, judgements and causality, comprehension of complex situations and uncommon descriptions of behaviors, attributes, and actions. Mechanics and grammar are not evaluated. Specific writing element categories measured are fluency of writing, language usage, story structure, novelty, and personal interpretation. Points are given based on whether or not an element is present in the writing sample. Additional and vivid presentation of personal experience. This measure is sensitive to target populations and is available for kindergarten to adult.

Resource Sheet #12

Using Grades as Data

Purpose

- grades serve as indicators of high achievement when they evaluate a process or product
- grades can be one piece of data collected

Advantages

- availability of data
- source of developmental history of students
- teachers have opportunities to observe different kinds of tasks

Disadvantages

- contain irrelevant characteristics such as doing extra work, cooperativeness, behavior in class
- grading standards vary among teachers

A Recommended Procedure

The following coding procedure is easy and makes finer discriminations at the top of the distribution than at the middle or the bottom. It is essential that those who will be plotting scores on the *F-TAP* have a complete understanding of the differences between and among test scores. There are three sets of grades using a grading system A through F with no pluses or minuses used, this procedure makes patterns of competencies easy to discern.

A Coding System for Teachers' Marks

Code	Description
1	All grades of A
2	Two grades of A, other no lower than B
3	One grade of A, other two no lower than B
4	All grades of B
5	One grade of A, one B, one C
6	Two grades B, one C
7	No grade higher than B, no more than one B, remainder C or lower, or all Cs or lower

Resource Sheet #13

Understanding Relevant Measurement Concepts

Reliability

Reliability refers to the degree to which scores obtained with a given instrument remain constant. There are various forms of reliability. Split-half reliability divides the items in a given instrument and compares the degree to which the scores are correlated. Test-retest reliability determines the degree to which the observed score will change over time.

Validity

There are four types of validity. Criterion-related validity, concurrent validity, content validity, and predictive validity. Criterion-related validity examines the degree to which a measure is related to the content the instrument is intended to measure. Concurrent validity examines the degree to which a characteristic is present within an individual. Content validity refers to the degree that items on a given measure appear to match the content being assessed. Predictive validity identifies the degree to which the measure assesses a future condition. Each of these needs are to be considered when evaluating a test. It should reach a level of a least .80 in order to be reasonably certain that the test is actually measuring what the authors claim that it measures.

Types of Scores

It is essential that those who will be plotting scores on the *F-TAP* have a complete understanding of the differences between and among test scores. There are three common types of scores that are plotted–percentile, standard, and percentage or Likert-type scores. This section will describe each of these types of scores.

Percentiles

Percentiles are normalized scores that allow comparison among students based on the sample used to construct the test. The median score is fifty. There are no standard deviations when percentile scores are reported. The difference between a 97 and 98 is greater than the difference between a 50 and 51. The first standard deviation from the mean in each direction is 34 percentile points. Thus, 68 percent of the scores in any given sample will fall in this range. Thirteen points fall in the next standard deviation each way which accounts for an additional 26 percent of the scores. Therefore, 94 percent of the scores will be found within two standard deviations either direction from the mean.

Resource Sheet #13 (continued)

Deviational Scores

Deviational scores are normalized scores where the difference between one score and another is equal. Deviational IQ scores have a mean of 100 and a standard deviation of 15 in the case of the *Wechsler* tests and 16 in the case of the *Stanford-Binet*. Other tests will provide deviational scores. For example, the *Torrance Tests of Creative Thinking* have a standard deviation of 20. Therefore, *TTCT* score of 140 would be plotted at the same point as a *Stanford-Binet* score of 132.

Percentage/Likert-Type Scores

Percentages show how many of the items were answered correctly of the total number possible. Record the possible range next to the name of the instrument. Likert-type scores may be scales that range from five to ten possible ratings. Typically, these scales have ranges of five, seven, or ten. Some scales have four possible selections. These scales tend to force a response.

Resource Sheet #14

Plotting Data Gathered During the Assessment Phase

There are three places where data can be placed on the *F-TAP*.

1 All data used in the referral of the student should be placed under the Referral section of the *F-TAP*. This may be information from the *Panning for Gold Student Referral Form*. Other information collected from other referral forms may be utilized.

2. Standardized instruments or instruments for which percentages are used are plotted on the matrix that is included in the Assessment section of the *F-TAP*. It is necessary to be aware of what type of scores are being plotted. As noted in the section on types of scores, the number next to the data point on the profile may appear to be in the wrong place. It is important to keep in mind that different types of scores are being plotted. It is also important to note that percentages can easily be confused with percentiles.

   In plotting data, the name of the test and subtests being plotted should be listed along the left column side of the graph. In the space next to the test or subtest, a dot should be placed in the center of that row. The score should be written next to the dot. Once all of the items have been placed on the graph, they should be connected using a straight edge. This will assist in the next phase of the process by providing a way to visually examine all of the scores at once.

3. Narrative data and data reported as raw scores should be noted on the section labeled Advocacy Information. These may include writing sample scores, information collected from interviews, or any other nonquantifiable data. Other data such as score on attitude measures, language proficiency measures, or other items not directly related to the TABs should also be noted in this area.

Resource Sheet #15

Facilitating Program Placement Decisions

Purpose

Program placement decisions are made by recognizing patterns that emerge when considering all the data that have been collected on the students. Giftedness is perceived as an interaction of traits, aptitudes, and behaviors of an individual (Hagen, 1980) and placement decisions must be guided by what has been revealed by the information gathered in the assessment process. Difficulties in decision-making arise when there are inconsistencies among the data. The following set of guidelines are listed so that effective decisions can be made. Helpful tips are also listed to assist with possible ways to organize the reviewing of student profiles.

Referral Process

1. Focus on the interaction of data to improve accuracy of decisions; the whole is greater than the sum of its parts.

    - Do not overlook the use of evidence on interest and motivation.
    - Pay attention to what does not make sense. Following up with questions can lead to how it relates to the topic.
    - Understand what is measured by each instrument, how it is measured, and to whom it relates.

2. Use the most accurate and valid measures for the population you are assessing.

    - Pay attention to the validity and reliability of the procedure or instrument used to collect information.
    - Look at past educational record for other patterns.
    - Consider the entire profile of the student; focus group's attention away from thinking of one measure being more valid than another.

3. Gather more information to be included in the Sources for Advocacy Information section to accurately appraise students' levels of potential.

Resource Sheet #15 (continued)

Helpful Tips for Organization

1. Review, with school-based committee members, the various types of instruments used. Explain and provide handouts of how the information is to be interpreted.

2. Provide examples of what the school-based committee members will be looking for and walk them through the process.

3. Until school-based committee members are familiar or comfortable with the holistic emphasis go through some of the profiles. Begin with dividing the profiles into three different piles: "needs services," "needs more information," and "not needing services at this time."

4. If the committee members feel unsure of their ability of reviewing the files, let them know that after the three piles are completed, a review of the each pile is important for the examination of consistencies. As the committee proceeds with the process, they will become more comfortable.

5. During the review of profiles:

   - Raise questions about observations not seen.
   - Double-check to make sure agreement has been reached and understood by all members.
   - Balance focus of data and reasoning; call attention to the entire F-TAP; refer to TABs Process/Performance, Advocacy, and Summary Sections.
   - Ask members for their rationale; this is especially helpful when a singular piece of data helps in making the decision when other data are essentially equal.
   - Enlist the aid of a recorder to record placement decisions and specific ideas discussed for programming and curricular development.

6. After making placement decisions, display and check the three different piles of profiles for consistency of criteria. Make sure all members are comfortable with the decisions.

Resource Sheet #16

From Assessment to Curriculum: Assisting Teachers in Identifying Curricular Modifications

The assessment process does not end with the placement recommendations made by the district-wide committee. Rather, committee members identify strengths and need areas for each student assessed and note them on the Educational Plan section of the *F-TAP*. It is this information that the committee provides for the teacher along with suggestions for modifications to the child's educational program. All relevant data should be annotated and consultations with the teachers conducted.

For example, a child may have a high score on a spatial section of a cognitive abilities test, but have average or low scores on the verbal and quantitative sections of the test. This would have definite implications with regard to how information is presented to the child. A very different recommendation would be in order if the high score was on the verbal or quantitative subtest.

Implications for curriculum, from data gathered on all tests should be provided to the teachers. However, due to confidentiality, the profiles themselves should not be provided to the teachers.

PART IV: Master Copies for Transparencies and Handouts

1. ***Panning for Gold TABs Descriptors***
2. **Sample Form Case Studies**
3. ***Panning for Gold Observation Sheet***
4. ***Panning for Gold Student Selection Sheet***
5. ***Panning for Gold Student Referral Form***
6. ***Frasier Talent Assessment Profile* (*F-TAP*)**

Panning for Gold TABs Descriptors

The following definitions and descriptions of traits, aptitudes, and behaviors associated with the giftedness construct may be used to observe the performance of children in your classroom

Motivation

Evidence of desire to learn.

Description: Forces that initiate, direct and sustain individual or group behavior in order to satisfy a need or attain a goal.

How it may look:
- aspires to be somebody, to do something.
- is an enthusiastic learner.
- demonstrates persistence in pursuing or completing self-selected tasks (may be culturally influenced; evident in school or non-school activities).

Interests

Intense (sometimes unusual) interests.

Description: Activities, avocations, objects, etc., that have special worth or significance and are given special attention.

How it may look:
- demonstrates unusual or advanced interests in a topic or activity.
- is a self-starter.
- is beyond age-group.
- pursues activity unceasingly.

Communication Skills

Highly expressive; effective use of words, numbers, symbols.

Description: Transmission and reception of signals or meanings through a system of symbols (codes, gestures, language, numbers).

How it may look:
- demonstrates unusual ability to communicate (verbally, physically, artistically, or symbolically).
- uses particularly apt examples, illustrations or elaborations.

Problem-Solving Ability

Effective, often inventive, strategies for recognizing and solving problems.

Description: Process of determining a correct sequence of alternatives leading to a desired goal or successful task completion.

How it may look:
- demonstrates unusual ability to devise or adapt a systematic strategy for solving problems and to change the strategy if it is not working.
- creates new designs, invents.

Memory

Large storehouse of information on school or non-school topics.

Description: Exceptional ability to retain and retrieve information.

How it may look:
- already knows information.
- needs only 1-2 repetitions for mastery.
- has a wealth of information about school or non-school topics.
- pays attention to details.
- manipulates information.
- is highly curious.

Inquiry

Questions, experiments, explores.

Description: Method or process of seeking knowledge, understanding or information.

How it may look:
- asks unusual questions for age.
- plays around with ideas.
- demonstrates extensive exploratory behaviors directed toward eliciting information about materials, devices, or situations.

Insight

Quickly grasps new concepts and makes connections; senses deeper meanings.

Description: Sudden discovery of the correct solution following incorrect attempts based primarily on trial and error.

How it may look:
- demonstrates exceptional ability to draw inferences.
- appears to be a good guesser keenly observant.
- possesses heightened capacity for seeing unusual and diverse relationships.
- integrates ideas and disciplines.

Reasoning

Logical approaches to figuring out solutions.

Description: Highly conscious, directed, controlled, active, intentional, forward-looking, goal oriented thought.

How it may look:
- makes generalizations.
- uses metaphors and analogies . . . think things through in a logical manner.
- thinks critically . . . comes up with plausible answers.

Imagination/Creativity

Produces many ideas; highly original.

Description: Process of forming mental images of objects, qualities, situations, or relationships which aren't immediately apparent to the senses. Problem-solving through nontraditional patterns of thinking.

How it may look:
- shows exceptional ingenuity using everyday materials.
- creates wild, seemingly silly ideas; often fluently/flexibly.

Humor

Conveys and picks up on humor.

Description: Ability to synthesize key ideas or problems in complex situations in a humorous way.

How it may look:
- has a keen sense of humor, may be gentle/hostile.
- see unusual relationships.
- demonstrates unusual emotional depth.
- demonstrates sensory awareness.

Adapted from Sandra Kaplan's "Jot Sheet."

Samples From Case Studies

#1: Sirtavion

The first thing about Sirtavion that catches and holds one's attention is his disruptive behavior. This behavior has been compounded by the strong leadership ability he demonstrates with his peers. Looking beyond that, you see a bright inquisitive mind that wants to answer every question (on his good days) and usually answers questions correctly. Despite Sirtavion's behavior he finishes every assignment quickly and neatly. Finishing his school work has always been Sirtavion's highest priority. You have noticed that Sirtavion's parents do not have a strong educational background. Despite this, Sirtavion demonstrates a good backlog of information on many subjects. Much of the information he has acquired has been on his own. Sirtavion is a very bright, inquisitive child who deserves help in developing his potential.

#2: Tamika

Tamika was asked the question, "In general, how often do you wonder about things?" Her response is: "I don't stop wondering. I don't ever stop wondering. The only time if I stop wondering is when I am dead. I am always wondering. I am always curious. I am always running my mind on something. Because daydreams ain't a part of this world. Daydreams is a part of the flame that starts this world**.**"

#3: Liu

Liu came to your attention because her first grade teachers were asked to refer superior students for placement in the gifted program. The teachers were asked to rate each child referred on specific characteristics of gifted children. She received the highest scores on the following characteristics: learns rapidly and retains what she has learned, uses a rich vocabulary accurately, shows marked degree of curiosity, reasons well, recognizes relationships, comprehends abstract ideas, works independently, shows characteristics of leadership, and shows concern for the interest and welfare of others. But alas, on the *Cognitive Ability Test* given in May, Liu scored at the 87 percentile on the verbal battery, at the 98 percentile on the nonverbal battery, and at the 17 percentile on the quantitative battery.

#4: Enrique

Enrique's record showed him to be below grade level when he entered kindergarten. His language skills were low enough for him to qualify for speech/ language help. He has missed several days of school and has been tardy on many days. Still, he continued to make excellent progress in language arts, math, science, and social studies in the second grade.

All of his teachers believed he had unusual learning ability. His speech teacher felt that even though he came to kindergarten with few language skills, he has bridged the gap now that he has learned to read! Exemplary of this is the fact that he has read over seventy books this year in addition to the second and third grade Houghton-Mifflin basals.

Panning for Gold Observation Sheet

Circle One: Class Student

Name: _____

Directions: Use the boxes below the definitions and descriptions of the basic **traits, aptitudes, and behaviors (TABs)** associated with the giftedness construct to record examples of **TABs** displayed by the student(s). Use the scale in the box to summarize your evaluation.

Motivation	**Interests**	**Communication Skills**	**Problem-Solving Ability**	**Memory**
Evidence of desire to learn. Description: Forces that initiate, direct and sustain individual or group behavior in order to satisfy a need or attain a goal. Student may: • aspire to be somebody, do something. • be an enthusiastic learner. • demonstrate persistence in pursuing or completing self-selected tasks (may be culturally influenced; evident in school or non-school activities).	Intense (often unusual) interests Description: Activities, avocations, objects, etc., that have special worth or significance and are given special attention. Student may: • demonstrate unusual or advanced interests in a topic or activity. • be a self-starter. • be beyond age-group. • pursue activity unceasingly.	Highly expressive; effective use of words, numbers, symbols. Description: Transmission and reception of signals or meanings through a system of symbols (codes, gestures, language, numbers). Student may: • demonstrate unusual ability to communicate (verbally, physically, artistically, symbolically). • use particularly apt examples, illustrations or elaborations.	Effective, often inventive, strategies for recognizing and solving problems. Description: Process of determining a correct sequence of alternatives leading to a desired goal or successful task completion. Student may: • demonstrate unusual ability to devise or adapt a systematic strategy for solving problems and to change the strategy if it is not working. • create new designs, invent.	Large storehouse of information on school or non-school topics. Description: Exceptional ability to retain and retrieve information. Student may: • already know information. • need only 1-2 repetitions for mastery. • have a wealth of information about school or non-school topics. • pay attention to details. • manipulate information. • be highly curious.
Motivation	**Interests**	**Communication Skills**	**Problem Solving Ability**	**Memory**
Evidence of desire to learn. 5 4 3 2 1 Strong Moderate Weak	Intense (sometimes unusual) interests. 5 4 3 2 1 Strong Moderate Weak	Highly expressive and effective use of words, numbers, and symbols. 5 4 3 2 1 Strong Moderate Weak	Effective, often inventive, strategies for recognizing and solving problems. 5 4 3 2 1 Strong Moderate Weak	Large storehouse of information on school or non-school topics. 5 4 3 2 1 Strong Moderate Weak

Panning for Gold Observation Sheet

(continued)

Inquiry	**Insight**	**Reasoning**	**Imagination/Creativity**	**Humor**
Questions, experiments, explores. Description: Method or process of seeking knowledge, understanding or information. Student may: • ask unusual questions for age. • play around with ideas. • demonstrate extensive exploratory behaviors directed toward eliciting information about materials, devices or situations.	Quickly grasps new concepts and makes connections; senses deeper meanings. Description: Sudden discovery of the correct solution following incorrect attempts based primarily on trial and error. Student may: • demonstrate exceptional ability to draw inferences. • appear to be a good guesser. • be keenly observant. • possess heightened capacity for seeing unusual and diverse relationships. • integrate ideas and disciplines.	Logical approaches to figuring out solutions. Description: Highly conscious, directed, controlled, active, intentional, forward-looking, goal oriented thought. Student may: • make generalizations. • use metaphors and analogies. • think things through in a logical manner. • think critically. • think things through and come up with a plausible answer.	Produces many ideas; highly original. Description: Process of forming mental images of objects, qualities, situations or relationships which aren't immediately apparent to the senses. Problem-solving through nontraditional patterns of thinking. Student may: • show exceptional ingenuity using everyday materials. • have wild, seemingly silly ideas • produce ideas fluently/flexibly.	Conveys and picks up on humor Description: Ability to synthesize key ideas or problems in complex situations in a humorous way. Student may: • have keen sense of humor, may be gentle/hostile. • see unusual relationships. • demonstrate unusual emotional depth • demonstrate sensory awareness.
Inquiry	**Insight**	**Reasoning**	**Imagination/Creativity**	**Humor**
Questions, experiments, and explores 5 4 3 2 1 Strong Moderate Weak	Quickly grasps new concepts and makes connections. Senses deeper meanings 5 4 3 2 1 Strong Moderate Weak	Logical approaches to figuring out solutions 5 4 3 2 1 Strong Moderate Weak	Produces many ideas, highly original 5 4 3 2 1 Strong Moderate Weak	Conveys and picks up on humor 5 4 3 2 1 Strong Moderate Weak

Panning for Gold Student Selection Sheet

Group I	Group II
This child shows real strength, but, in my best judgement, he/she is **not a member of one of the target populations**—economically disadvantaged or of limited English proficiency.	This child is a member of one of the target groups, and I feel **very strongly** that he/she is potentially gifted.
Group III	**Group IV**
This child is a member of one of the target groups, and I've seen some indicators of high potential, but I'm just **not sure** if gifted placement would be in his/her best interest.	This child is a member of one of the target groups, and he/she occasionally shows some real "sparks of potential," but overall he/she is **probably not a good candidate** for referral.

Panning for Gold Student Referral Form

Name of Student: _____ Gender: M F

_____

School: _____ Grade: _____ Birth date: __/__/__

Name of Person Referring: _____

Relation to Student: _____

Racial/Ethnic Identification (please be as specific as possible: i.e., Lebanese, African-American, Cuban-American):

Length of residency in the U.S.:

Primary language spoken at home:

Language proficiency scores, if available: First language _____ English_____

Directions: Please rate the student being referred for assessment on each TAB. Also provide specific example(s) or comment(s) for each of the TABs. The *Panning for Gold TABs Observation Sheet* may assist you in completing this form.

Motivation

- demonstrates persistence in pursuing/completing self-selected tasks (may be culturally influenced); evident in school or non-school type activities
- is an enthusiastic learner
- aspires to be somebody, do something
- In this area, the student is: Strong Average Weak
  5 4 3 2 1
- Specific example(s)

Interests

- demonstrates unusual or advanced interests in a topic or activity
- is a self-starter
- is beyond age-group
- pursues activity unceasingly
- In this area, the student is: Strong Average Weak
  5 4 3 2 1
- Specific example(s)

Communication

- demonstrates unusual ability to communicate verbally, physically, artistically, or symbolically
- uses particularly apt examples, illustrations, or elaborations
- In this area, the student is: Strong Average Weak
  5 4 3 2 1
- Specific example(s)

Problem-Solving Ability

- demonstrates unusual ability to devise or adapt a systematic strategy for solving problems and to change the strategy if it is not working
- creates new designs
- is an inventor/innovator
- In this area, the student is: Strong Average Weak
  5 4 3 2 1
- Specific example(s)

Memory

- already knows information
- needs only 1-2 repetitions for mastery
- has a wealth of information about school or non-school topics
- pays attention to details
- manipulates information
- In this area, the student is: Strong Average Weak
  5 4 3 2 1
- Specific example(s)

Inquiry

- asks unusual questions for age
- plays around with ideas
- demonstrates extensive exploratory behaviors directed toward eliciting information about materials, devices, or situations
- In this area, the student is: Strong Average Weak
  5 4 3 2 1
- Specific example(s)

Insight

- demonstrates exceptional ability to draw inferences
- appears to be a good guesser . . . keenly observant
- possesses heightened capacity for seeing unusual and diverse relationships
- integrates ideas and disciplines
- In this area, the student is: Strong Average Weak
  5 4 3 2 1
- Specific example(s)

Reasoning

- makes generalizations
- uses metaphors and analogies
- can think things through in a logical manner
- thinks critically . . . comes up with plausible answers
- In this area, the student is: Strong Average Weak
  5 4 3 2 1
- Specific example(s)

Imagination/Creativity

- shows exceptional ingenuity in using everyday materials
- creates wild, seemingly silly ideas, often fluently and flexibly
- In this area, the student is: Strong Average Weak
  5 4 3 2 1
- Specific example(s)

Humor

- keen sense of humor that may be gentle or hostile
- sees unusual relationships
- demonstrates unusual emotional depth
- demonstrates sensory awareness
- In this area, the student is: Strong Average Weak
  5 4 3 2 1
- Specific example(s)

Any other significant observations of abilities:

Format adapted from: Portland Public Schools, Portland, Oregon
The National Research Center on the Gifted and Talented
The University of Georgia
Revised 7/92

Frasier Talent Assessment Profile™

Student Information

Name_____Student Code_____

D.O.B._____Gender___Race/Ethnicity____

Grade_____ School Name/Number_____

Parent/Guardian_____

Referred By:_____

Relationship to Student_____

Committee Decisions

(Record sequence and outcomes of committee decisions here)

Student Code _______ **Assessment**

Process/Performance

Data Categories	Test/Rating Scale/Rater Observer/Product/ Performance/ Descriptor/etcetera		
		Percentile	1 2 16 50 84 98 99.9
		Stanine	1 2 3 4 5 6 7 8 9
		Deviational IQ	52 68 84 100 116 132 148
		Standard Deviation	-3 -2 -1 0 +1 +2 +3

	x *Test ABC item subtest*					*32*		

		Below Average Average Above Average
	Percentage	10 20 30 40 50 60 70 80 90 100
	Likert Scale	1 2 3 4 5 6 7 8 9 10

Student Code _____ **Assessment**

Advocacy Information

Language Proficiency

Self-Perception of Ability

Additional Information Aptitude/ Achievement

Other

Referral

TABs Summary

_____Motivation

_____Interests

_____Communication Skills

_____Problem-Solving Ability

_____Memory

_____Inquiry

_____Insight

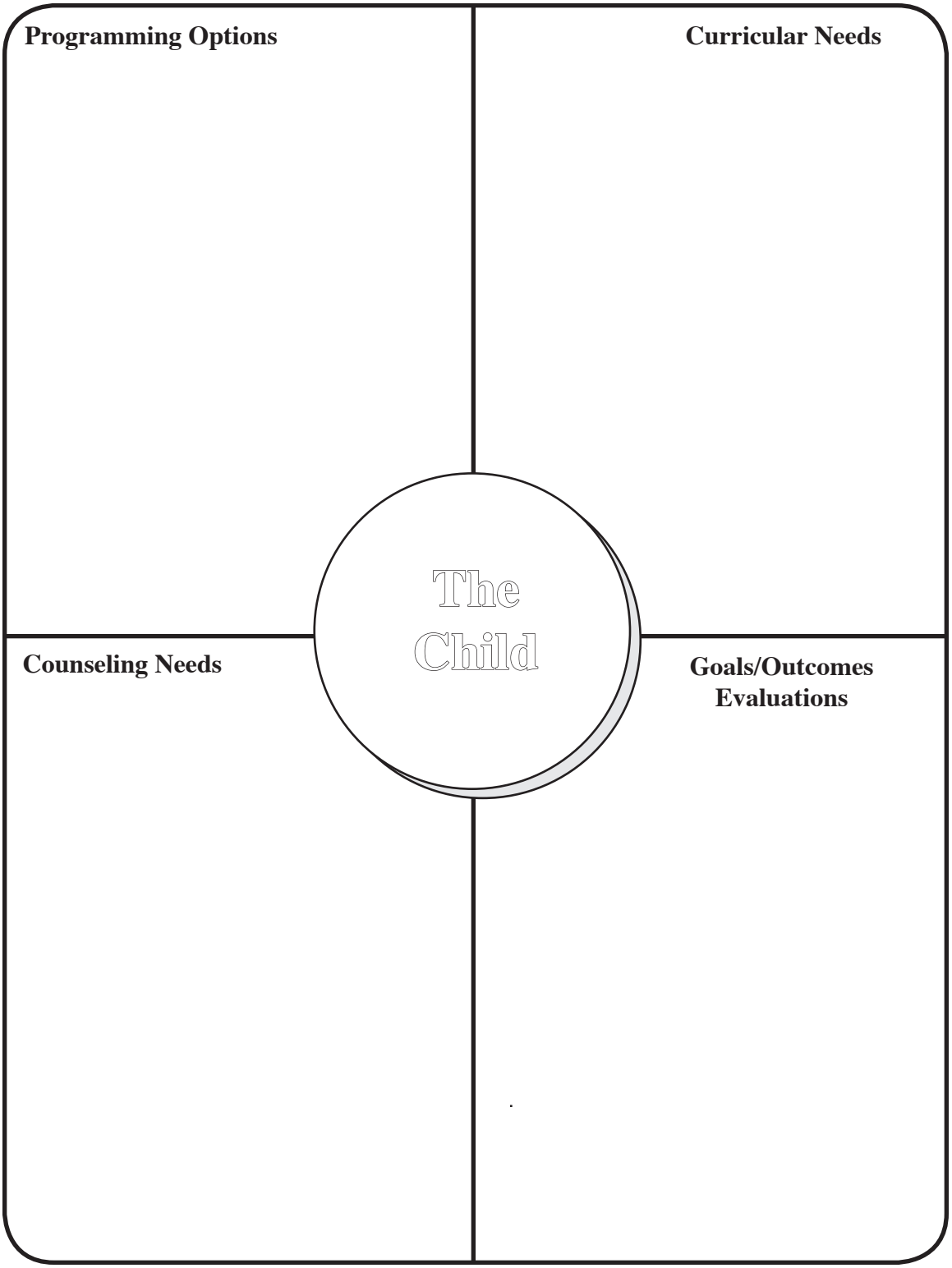
_____Reasoning

_____Imagination/Creativity

_____Humor

Student Code _____

Educational Plan



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Appendix A

Bibliography of Tests, Rating Scales, Products, and Process Measures

Bracken Basic Concepts Scale (BBCS) (1984)

Published By: Charles E. Merrill Publishing Company
1300 Alum Creek Drive
Columbus, OH 43216

Purpose: Over 250 basic concepts found to be a prerequisite to learning are used to identify specific concepts not known by children, develop Individualized Educational Programs, and rank and compare children by age and conceptual level.

Format: There are two formats of the Bracken Scale that may be used. Level 1 is a 30 question quick norm-referenced screening device for students in kindergarten and first grades. Level 2 is an in-depth diagnosis where each child proceeds through the first five subtests until 3 consecutive items are missed. This forms the basis for the School Readiness Composite and determines how to proceed with the next six subtests.

Scoring: Scoring is performed by the test administrator and yields standard scores, concept ages, percentile ranks, and a subtest profile. Eleven subtest scores are given in the following categories: Color, Letter Identification, Numbers/Counting, Comparisons, Shape, Direction/Position, Social/Emotional, Size, Texture/Material, Quantity, Time/Sequence.

Norming Information: The norming population consisted of 1,100 children ages 2 1/2 through 8 representative of the 1980 U.S. Census figures. The variables used in selecting children were age, sex, ethnic group, geographical region, and parent education.

Reliability: Information is available on the internal consistency of subtests and total test scores, stability (test/retest), and equivalent forms reliability.

Validity: Information is available on content, construct, and criterion-related validity.

Relationship to TABs Summary: This tool assesses the conceptual knowledge of the 2 1/2 to 8 year old child.

> **Insight:** The child must look for the relationships among 4 items to find the item that is different from the others and answers the test administrator's questions.
>
> **Reasoning:** The child must make generalizations and think critically in order to come up with solutions to questions such as which person is sad, when shown four pictures of people showing different emotions.

Children's Academic Intrinsic Motivation Inventory (CAIMI) (1986)

Published By: Psychological Assessment Resources, Inc.
P.O. Box 98
Odessa, FL 33556

Purpose: The CAIMI measures motivational orientation towards school learning in general, and across specific subject areas for students in grades 4-8. The 122 items comprise 5 scales: Reading, Math, Social Studies, Science, and General. This self-report inventory can be administered individually or in group settings in about 20-30 minutes.

Format: Group or individually administered self-report inventory.

Scoring: Scoring information is provided in the manual and can be completed by the teacher or test administrator. The scores reflect academic intrinsic motivation defined as enjoyment of school learning characterized by an orientation toward mastery; curiosity; persistence; and the learning of challenging, difficult, and novel tasks. The scores on the CAIMI are positively related to scores on the Harter Motivational Scales.

Norming Information: Local norms can be established, but no national norms are provided.

Reliability: In the most recent studies, internal consistency (coefficient alpha) was computed for each subscale and ranged from .83 to .92. Test-retest reliability over a 2 month interval on a random sample of subtests ranged from .66 to .76. In both cases coefficients were consistent across grade, sex, and race.

Validity: Validity is discussed in relation to the Harter Scales of intrinsic/extrinsic motivation.

Relationship to TABs Summary: This 122 item test measures motivation for school learning as well as motivation for learning in specific subject areas. The five scales included in this self report are Math, Reading, Social Studies, Science, and General. This tool is geared toward students from grades 4-8.

> **Motivation:** Motivation is addressed by asking about the students' interests in studying certain subject areas and if they become bored studying certain subjects.

Developing Cognitive Abilities Test (DCAT) (1990)

Published By: American Testronics
Chicago, IL

Purpose: This test is a group measure of learning characteristics and abilities that contribute to academic performance in grades 1-12. All levels measure three content areas: verbal ability, quantitative ability, and spatial ability; and information for five levels of Bloom's taxonomy: knowledge, comprehension, application, analysis, and synthesis. It is intended to give an indication of those cognitive characteristics that can be altered in the school environment.

Format: Verbal directions are to be given by teachers. Students complete a multiple choice test with answer sheets are used for students to complete. The test takes approximately 60 minutes to complete, but can be paced for those students at the lowest level.

Scoring: Machine scoring and scoring reports with national norms are available. Derived scores include percentile ranks, normal curve equivalents, stanines, equal interval scores, and cognitive ability indicators.

Norming Information: The test was normed in 1988-1989 from a deeply stratified, multistage national probability sample of K-12 public and parochial school students. This sample consisted of students from various ethnic backgrounds as well as students from low socioeconomic backgrounds. Scores of 9,916 students in gifted programs are included and separate norms are available.

Reliability: The manual reports reliability coefficients by grade levels ranging from .88 to .96

Validity: Content validity is discussed in the manual. Criterion-related validity is reported as between .75 and .80.

Relationship to TABs Summary:

> **Problem-Solving Ability:** This instrument assesses the specific abilities that are related to school performance. The eight test levels may be used with children ranging from first through twelfth grade. The three content areas measured are verbal ability, quantitative ability, and spatial ability. It also provides information for the six levels of Bloom's taxonomy.

Dimensions of Self-Concept (DOSC) (1989)

Published By: Edits
P.O. 7234
San Diego, CA 92107

Purpose: The purpose of the DOSC is essentially twofold: (1) to identify those students who might experience difficulty in their schoolwork because of their perceptions of a low degree of self-esteem or self-regard and (2) to diagnose for purposes of counseling or guidance those areas that might contribute to low self-esteem and to impaired learning capabilities relative to negative affectivity. This instrument is appropriate for students in grades 4 through college.

Format: The DOSC is a group or individually administered self report instrument that reflects the perceptions that students have for each of the five a priori dimensions of self-concept.

Scoring: The DOSC can be scored by hand or can be returned to Edits for machine scoring.

Norming Information: The norming population consisted of a representative sample from the 1980 U.S. Census figures using 635 students in grades 4-12 in the Los Angeles Unified School District and 239 undergraduate students from the Los Angeles area.

Reliability: Internal-consistency estimates for each of the 5 factor scales ranged from .70 to .90.

Validity: Concurrent validity, relative to criterion measures reflecting cognitive functions, predictive, and construct validity are discussed in the technical manual.

Relationship to TABs Summary: This is a self-report measure that addresses non-cognitive factors associated with the student's self-esteem or self-concept in school. This scale measures five factor dimensions which are Level of Aspiration, Anxiety, Academic Interest and Satisfaction, Leadership and Initiative, and Identification vs. Alienation.

> **Interests:** This scale measures the student's interest in learning, doing academic work, and studying new subject matter.

Educational Development Series (EDS) (1985)

Published By: Scholastic Testing, Inc.
480 Meyer Road, P.O. Box 1056
Bensenville, IL 60106

Purpose: The series consists of nonverbal and verbal cognitive skills, reference skills, reading, language arts, mathematics, science, and social studies; along with tests of students' interests in school subjects (beginning at grade 3) educational goals, and career plans (beginning at grade 4). According to the manual the nonverbal scores help identify unrecognized potential as well as discrepancies between educational plans and measured achievement.

Format: Verbal directions are to be given by educator to students. Multiple choice design with answer sheets are used for students to complete. The test takes less than six hours.

Scoring: All measures defined and reported in the same way at grade levels, K-12, to provide for comparisons. The scoring service must be used and it provides local and national percentiles and grade scores, national percentiles on summary reports, standard scores, local stanines, grade scores, and national percentiles on class lists and labels. Master summary by grade is provided. Cognitive skills quotients are provided when nonverbal tests are given. Performance profile option provides both norm-referenced and criteria referenced information for identifying skill strengths and weaknesses.

Reliability: KR 21 produced high 80's for subtests, high 90's for composite scores.

Validity: Validity studies show a strong relationship between the EDS and various external criterion measures, according to the manual.

Relationship to TABs Summary:

Interests: The battery assesses the cognitive skills, achievement, interests, and career/school plans of the student. The series includes tests of verbal and non-verbal cognitive skills, reading, language arts, mathematics, reference skills, science, and social studies. Beginning at grade three the scores indicate the student's interest level in art, music, science, social studies, English, and foreign language.

Reasoning: The following subtest addresses Problem-Solving Ability: Mathematics (this subtest includes solving word problems.)

Memory: The subtests address the memory of school subjects: science, social studies, and verbal skills.

Gifted Evaluation Scale (GES) (1987)

Published By: Hawthorn Educational Services
P.O. Box 7570
Columbia, MO 65205

Purpose: The GES rates students on items geared to the five areas of giftedness referred to in the federal definition: intellectual ability, creativity, specific academic aptitude, leadership ability, performance, and visual arts. The GES is intended to help make placement decisions for gifted and talented students.

Format: To be completed by educators with primary observational opportunities with students in grades K-12. The scale takes approximately 20 minutes to complete and contains 48 items.

Scoring: The scale is self scoring. The sums of the item raw scores yield subscale raw scores which are converted to subscale standard scores. Subscale standard scores are summed to arrive at a quotient score for the total scale with a mean of 100 and a standard deviation of 15. Percentiles are included for quotients.

Norming Information: The norming population consisted of 2,276 students in grades K-12 approximating the national percentages for sex, residence, race, geographical area, and parental occupation.

Reliability: Alpha = .90 (total scale); test-retest reliability >.91 for each subscale. Inter-rater reliability for subscales ranged from .91 to .93 for all age levels.

Validity: Criterion-related with WISC-R, SOMPA: All subscales significantly correlated. Content validity and construct validity were addressed with no details provided.

Relationship to TABs Summary: This scale is most appropriate when administered by the student's teacher who is most familiar with the student. It includes statements which are rated by the teacher regarding the student's academic performance. Scores are reported in the following subscale areas: Intellectual, Creativity, Specific Academic Aptitude, Leadership Ability, and Performing and Visual Arts.

> **Imagination/Creativity:** This scale addresses creativity through questions about the student's ability to combine information, ability to create or produce elaboration in play or school related work. (Questions which make up the creativity subscale address the Imagination/Creativity, Reasoning, Problem-Solving, Inquiry, and interest TABs as well.)

Group Inventory for Finding Creative Talent (GIFT) (1980)

Published By: Educational Assessment Service, Inc.
West 6050 Apple Road
Watertown, WI 53094

Purpose: To screen elementary school students for programs for the creatively gifted by identifying students with attributes and values associated with creativity: independence, curiosity, perseverance, flexibility, and breadth of interests. The test is available in Spanish, French, German, and Hebrew.

Format: Self-Report Inventory for: Primary level grades K - 2 (32 items)
Elementary level grades 3 - 4 (34 items)
Upper Elementary level grades 5 - 6 (33 items)

Scoring: The scoring service must be used. The printout yields percentiles and NCE scores.

Norming Sample: The norming sample consisted of 8,000 children stratified by grade; rural, urban, suburban; five geographical areas; minority and White.

Reliability: Spearman-Brown r's: primary = .80, elementary = .86, upper elementary = .88. Test-retest reliability over six month interval = .56 (N=126).

Validity: Based on personality characteristics of creative and talented children as assessed on other creativity instruments. Criterion-related has correlation with composite score on the teacher's ratings and experimenter ratings of short stories and pictures range from .28 (Urban Hispanic grades 4-6, N = 59) to .43 (Urban White, grades 4-6 , N = 68). International criterion-related validity ranged from .07 (Australian upper and middle SES, grades 1-2, N = 31) to .45 (Australian upper-middle and lower-middle rural SES, grades 3-6, N = 56). Validity information is available for special populations.

Relationship to TABs Summary: The GIFT is made up of a series of statements that the student is required to respond to with a "Yes" answer if he/she agrees with it, or a "No" answer if he/she does not agree. This tool addresses the student's Interests, level of inquiry and Imagination/Creativity.

Group Inventory for Finding Interests (GIFFI) (1980)

Published By: Educational Assessment Service, Inc.
West 6050 Apple Road
Watertown, WI 53094

Purpose: To identify students with attributes and values associated with creativity: independence, curiosity, perseverance, flexibility, breadth of interests, risk-taking, sense of humor, etc. Dimensions are: Creative Arts and Writing, Challenge, Inventiveness, Confidence, Imagination, and Interests.

Format: Self-Report inventory for: Level 1 Grades 6-9 and Level 2 Grades 9-12. The test is available in Spanish and Hebrew. There is no time limit, but the approximate time is 20 to 35 minutes to complete the 60 items.

Scoring: The scoring service must be used. The printout yields percentile and NCE scores for each student's overall score. Dimension scores are reported in stanines.

Norming Sample: The norming sample consisted of 8,000 children stratified by grade; rural, urban, suburban; five geographical areas.

Reliability: Internal consistency correlates: - .88 for GIFFI, .94 for GIFF II.

Validity: Criterion-related validity established by correlation with composite score of teacher ratings of creativeness and experimenter ratings of short stories. Correlations ranged from .33 to .49 for GIFF I; .29 to .68 for GIFFI II. Validity information is available for special populations.

Relationship to TABs Summary: The GIFFI is used to identify students with attitudes and interests that are usually associated with creativity. This Likert-type scale can be used with students in grades 6-12.

> **Interest:** Addressed by statements referring to what the student likes to do as well as hobbies.
>
> **Imagination/Creativity:** Addressed by statements referring to the student's desire to create in various mediums.
>
> **Inquiry:** Addressed by the student's responses to statements regarding desire to see how things work and a desire to attain more knowledge.

Kaufman Assessment Battery for Children (K-ABC) (1983)

Published By: American Guidance Society
Publisher's Building
Circle Pines, MN 55014

Purpose: The K-ABC is an individually administered measure of intelligence and achievement for children from two and one-half years old through 12 and one-half years old for use in school or clinical settings. The multi subtest battery yields standard scores in sequential processing, simultaneous processing, a combination of the two critical mental processing composite, and in achievement. The intelligence scores are based on problem solving ability, and the achievement scores on knowledge of facts.

Format: Individual test record is to be completed by a psychologist, or other professional trained in psycho-educational assessment, based on a student's performance on each presented task. Administration time averages from 45 minutes for preschool children to 75 minutes for older youngsters; 7 to 13 subtests are given.

Scoring: When completing the test record form, examiners obtain profiles of standard and scaled scores for each child, band the scores with error, and convert these derived scores to national percentile ranks, and optional sociocultural percentile ranks. The mean is 100 and the standard deviation is 15. Stanines are also available.

Norming: Stratified multistage sampling with 2,000 children at 34 test sites in 24 states was done in 1981. The proportion of total minority group children nearly approximates the proportions in the U.S. Representation from special education and gifted populations is included.

Reliability: Split-half, test-retest, and alternate levels reliability coefficients are provided by subtest, intercorrelation, and age.

Validity: Construct, predictive, and concurrent validity are provided through 43 studies.

Relationship to TABs Summary: This instrument is an individually administered test of intelligence.

Insight: Magic Window, Matrix Analogies, and Photo Series subtests.

Reasoning: Matrix Analogies, Triangles, Riddles, and Photo Series subtests.

Problem-Solving Ability: The Triangles, Matrix Analogies, Photo Series, and Arithmetic subtests.

Memory: Face Recognition, Hand Movements, Number Recall, Word Order, and Spatial Memory subtests.

Matrix Analogies Test - Short Form (MAT-S)

Published By: Merrill Publishing
1300 Alum Creek Drive
Columbus, OH 43216

Purpose: The MAT provides a nonverbal way to measure reasoning ability in students ages 5-17 while reducing the effects of such variables as verbal skills, primary language, and motor coordination. This can be particularly helpful when students have limited English proficiency or are unwilling to interact verbally perhaps due to language and/or cultural differences.

Format: The MAT may be group or individually administered and is a nonverbal test consisting of 34 abstract designs with missing elements in matrix form. A self-scoring answer sheet is provided.

Norming Information: The MAT was normed with the *Multilevel Academic Survey Test* (*MAST*) to provide an ability/achievement discrepancy. Over 2,700 students in grades K-12 were administered both instruments.

Reliability and Validity: Large group factor analytic studies and correlation with academic achievement across both age and grade variables were conducted.

Relationship to TABs Summary: This measure of nonverbal reasoning ability includes 34 items and is useful for use with children who do not speak English or have a limited command of the English language. The items are abstract designs with a missing portion which the student is expected to locate in the six answer choices supplied.

> **Insight:** The student is required to make inferences, see unusual and/or diverse relationships between the stimulus item provided, and make connections between the stimulus information provided.
>
> **Reasoning:** Logic is used to find connections and patterns between the information as well as in finding the portion that will complete the stimulus question. The student must make generalizations and use critical thinking to think the solution through in a logical manner.
>
> **Problem Solving:** The student is required to find a sequence or pattern in the information provided and use a systematic approach to find the answers and change his/her strategy if unsuccessful.

National Achievement Test (NAT) (1990)

Published By: American Testronics
Chicago, IL

Purpose: The NAT provides both norm-referenced and criterion-referenced information in the basic skill areas of reading, language, and mathematics, in addition to the areas of reference skills, social studies, science, and word attack.

Format: Academic achievement test for students in grades K-12.

Scoring: The scoring service must be used. The Student Class List is the basic scoring service offered, but additional reports may also be requested. These additional reports include Home Report, Individual Student Profile, Student Label, Frequency Distribution, Group Item Analysis, Class Objective/Item Analysis, Class Diagnostic Report, Building/ District Profile, Evaluator's Summary, Pre/Post Class List, and Classroom Organizer.

The Student Class List reports each student's subtest scores and total scores in Reading, Language, and Mathematics and provides a Basic Skills Total which profiles a student's combined performance on the Reading, Language, and Mathematics subtest. The user may select up to four of the following scores: raw scores, percent correct, equal interval score, grade equivalent, national percentile, local percentile, national stanine, local stanine, normal curve equivalent, and narrative descriptors.

Norming Information: The NAT was normed during the fall of 1988 and spring of 1989. The sample consists of 150,000 students from public and parochial schools stratified by school size, geographic region, and socioeconomic status. This sample consisted of students from various ethnic backgrounds as well as students from low socioeconomic backgrounds.

Reliability: Reliability coefficients (Kuder-Richardson Formula 20) are reported for each subscale of the test, broken down by level.

Validity: Content, criterion-related, and construct validity are discussed in the technical manual.

Relationship to TAB Summary:

> **Problem-Solving Ability:** The NAT has twelve levels (A through L) which can be used or kindergarten through twelfth grades and can be administered yearly. The subtests included on this scale are Reading, Language, Mathematics, Reference Skills, Social Studies, Science, and Word Attack.
>
> **Memory:** The applicable subtests include Reading, Language, Mathematics, Reference Skills, Social Studies, Science, and Word Attack.

Relationship to TAB Summary: (continued)

Insight: The Mathematics Problem Solving (Mathematics) portion of this subtest requires the student to use his/her observation skills to make connections and see relationships in the information which he/she is supplied with.

Reasoning: Mathematics Problem Solving (Mathematics) Logical approaches in thinking are necessary to solve mathematical problems presented in this subtest.

The School Attitude Measure (SAM) (1990)

Published By: American Testronics
Chicago, IL

Purpose: The School Attitude Measure is designed to examine several dimensions of student attitude. The SAM surveys students' views of their academic environment and of themselves as students, providing information on five attitudinal scales: Motivation for Schooling, Academic Self-Concept: Performance Based, Academic Self-Concept: Referenced Based, Student's Sense of Control over Performance, and Student's Instructional Mastery.

Format: Student self-report inventory for students in grades 1-12.

Scoring: The scoring service must be used. The Student Class List is the basic report form, but School and District Summary reports are available. The Student Class List report form can include a weighted raw score, national percentile, local percentile, and a normal curve equivalent for each student for each of five attitudinal dimensions, plus a total score.

Norming Information: The SAM was normed during the fall of 1988 and spring of 1989. The sample consists of 150,000 students from public and parochial schools stratified by school size, geographic region, and socioeconomic status.

Reliability: Reliability was calculated using Cronbach's coefficient alpha. The reliability is reported for each level and ranges from .91 to .96.

Validity: Construct validity is discussed in the manual.

Relationship to TABs Summary:

> **Motivation:** This instrument is in survey form using a Likert-type scale and makes statements regarding the students attitude toward school. It provides information on five attitudinal scales: (1) Motivation for Schooling—how the student feels about school, (2) Academic Self-Concept: Performance Based—how the student feels about school performance, (3) Academic Self-Concept: Reference Based—how the student feels others view the student's school performance, (4) Student's Sense of Control over Performance—how much control the student has over their school outcomes, (5) Student's Instructional Mastery—what the student needs to succeed and learn in school.

Peabody Individual Achievement Test - Revised (PIAT-R) (1989)

Published By: American Guidance Service
Publisher's Building
Circle Pines, MN 55014

Purpose: The PIAT-R is an individually administered achievement test providing assessment in six content areas of general information, reading recognition, reading comprehension, mathematics, spelling, and written expression, for grades K-12.

Format: Multiple choice for the first five content areas, student responds to choices from a book of plates; examiner records them on the test record. For written expression, student provides free response. The test takes approximately 60 minutes.

Scoring: For reading comprehension, mathematics, spelling, and the first 11 items in reading recognition, objective scoring is achieved through use of the multiple-choice format. For the other items, precise scoring guides and standards are provided. For each subtest and composite the mean is 100 and standard deviation is 15. Grade and age equivalents, percentile ranks, stanines, and normal curve equivalents are generated.

Norming Information: Standardized on a national sample of 1,563 subjects representative of the total school population in sex, grade, race or ethnic group, geographic region, and socioeconomic status in 1986.

Reliability: The manual reports data on split-half, Kuder-Richardson, test-retest, and item response theory. The coefficients reported for split-half ranges from .83 to .99.

Validity: Content validity and construct validity data are discussed in the manual.

Relationship to TABs Summary: This tool is in multiple choice format and is used with students in grades K-12.

> **Reasoning:** The mathematics subtest includes application problems, understanding of concepts, and computational skills.

The Stanford-Binet Intelligence Scale: Fourth Edition (1986)

Published By: The Riverside Publishing Company
8420 Bryn Mawr Avenue
Chicago, IL 60631

Purpose: This is an individually administered measure of intelligence for children 2 years old to 16 years old for use in school or clinical settings. The three level hierarchical model includes: crystallized abilities defined as verbal and quantitative reasoning; fluid-analytic abilities defined as abstract/visual reasoning; and short term memory. Each area is divided further yielding scores in 15 subtests, although no one examinee will ever be given all subtests.

Format: Requires individual test record completed by a psychologist, or other professional trained in psycho-educational assessment, based on a student's performance on each presented task. The testing levels arrangement allows for individual adaptation. The test takes between 60 and 90 minutes to complete.

Scoring: Examiner scores each item on the test record according to the manual. Raw scores on the single test are converted into standard age scores with a mean of 50 and a standard deviation of 8. Area and total test composites have a mean of 100 and a standard deviation of 16.

Norming Information: The total number of examinees tested across all ages ranged from 1,363 for Equation Building to 5,013 for Vocabulary, Comprehension, Pattern Analysis, Quantitative, Bead Memory, and Memory for Sentences. The total number of examinees for the remaining six subtests range from 3,020 to 3,824.

Reliability: Kuder-Richardson Formula 20 coefficients and test-retest information are reported in the manual.

Validity: Five studies with other IQ measures are reported in the manual.

Relationship to TABs Summary:

Insight: The subtests that show insight are Matrices, Paper Folding and Cutting, Verbal Relations, and Equation Building.

Reasoning: The subtests that show the student's use of reasoning are Matrices, Quantitative, Paper Folding and Cutting, Verbal Relations, and Equation Building.

Problem-Solving Ability: The subtests that show the student's ability to their problem solving skills include Quantitative, Pattern Analysis, Matrices, Paper Folding and Cutting, and Equation Building.

Memory: The subtests that show the student's use of memory are: The Bead Memory, Memory for Sentences, Memory for Digits, and Memory for Objects.

Thinking Creatively in Action and Movement (TCAM) (1981)

Published By: Scholastic Testing Service, Inc.
480 Meyer Road
Bensenville, IL 60106

Purpose: To identify creative thinking in preschool and primary children as a part of developing creative growth. The tasks are designed for children ages 3 years through 8 years to follow their natural forms of creative expression/movement. Fluency, originality, and imagination are measured.

Format: Child responds to examiner's direction concerning actions and movement. Examiner records responses in test record form. The response may be physical, verbal or both. The activities take 20 to 40 minutes.

Scoring: The examiner, with some training, scores the responses according to manual. The scores for fluency, originality, and imagination are totaled and converted into standard scores using the age charts provided in the manual. A standard score for each of the three areas is provided. No composite score is obtained. The mean is 100 and the standard deviation is 20.

Norming Information: Based on 1,896 children ranging in age from 3 to 8 years, with the majority of ages 4 and 5. Eleven states were represented and White and Black populations equally represented with Mexican, Asian, and African cultures also represented.

Reliability: Various studies reported in manual ranging from .90 to .99. Test-retest reliability at .84.

Validity: Content validity reported.

Relationship to TABs Summary: This tool assesses the three to eight year old child's ability to express himself/herself in action and movement since he/she has limited use of verbal expression. This tool addresses the areas of imagination/creativity and communication through the various methods that they exhibit in response to a given activity.

Torrance Tests of Creative Thinking, Figural A and B (TTCT) (1984)

Published By: Scholastic Testing Service, Inc.
480 Meyer Road
Bensenville, IL 60106

Purpose: Through use of activities that are models of the creative thinking process, the TTCT is designed to measure various elements of creativity as they emerge during the testing process. There are five norm-referenced measures: fluency, originality, abstractness of titles, elaboration, and resistance to premature closure; and 13 criterion-referenced measures. May be useful in group or individual administration.

Format: Person responds to presenter and stimuli in test booklet. The test takes approximately 30 minutes.

Scoring: A manual provides the basic information for scoring. However, without some training, scoring may not be accurate. The publisher provides a scoring service with multiple options. The norm-referenced measures are converted from raw to standard scores and a mean is derived cumulatively for the 5 measures. The mean is 100 and the standard deviation is 20. Scores for the criterion-referenced section are added to the cumulative norm-referenced areas. Conversion tables are provided from K-Adult.

Norming Information: 37,814 subjects from K-Adult.

Reliability: Reported in the .90's.

Validity: Various studies presented in manual on content, construct, and predictive validity.

Relationship to TABs Summary:

Communication Skills: The student is required to draw pictures and create titles for some of his/her pictures. The rater is looking for the communication of original ideas, emotion, and feeling.

Imagination/Creativity: The child is rated on the level of originality and imagination in the creation of pictures when given incomplete figures. Production of titles is also evaluated relative to creativity.

Humor: The rater is looking for unusual combinations and surprise in the student's work as well as the portrayal of something comical, funny, or amusing.

Wechsler Intelligence Scale for Children - Revised (WISC-R) (1974)

Published By: The Psychological Corporation
555 Academic Court
San Antonio, TX 78204

Purpose: An individually administered measure of intelligence for children ages 6 years 0 months old to 16 years eleven months for use in school or clinical setting. It consists of six Verbal and six Performance subtests.

Format: Individual test records are to be completed by a psychologist, or other professional trained in psycho-educational assessment, based on a student's performance on each presented task. Only 10 of the 12 subtests need to be given. The tests take between 50 and 90 minutes.

Scoring: For each of the 12 tests, the distribution of raw scores at each age level is converted to a scale with a mean of 10 and a standard deviation of 3. Scaled scores are then converted to cumulative IQ scores for verbal subtests, the performance subtests, and the full scale score. The verbal, performance, and full scale IQ distributions have a mean of 100 and a standard deviation of 15.

Norming Information: A stratified sample of 2,200 based on the 1970 US census was used. The non-White sample includes African-American, American Indian, Asian-American, and Hispanic cultures.

Reliability: Split-half coefficients measuring internal consistency and test-retest measuring stability were obtained. Verbal, performance, and full scale IQ's have average coefficients of .94, .90, and .96, respectively.

Validity: Manual provides data on correlation with three other intelligence tests.

Relationship to TABs Summary:

Insight: The Similarities, Picture Completion, Picture Arrangement, Block Design, and Object Assembly subtests show the student's insight.

Reasoning: The subtests that demonstrate the student's reasoning ability are Similarities, Picture Arrangement, and Object Assembly.

Problem Solving-Ability: The subtests that demonstrate the student's problem solving ability are Arithmetic, Picture Completion, Picture Arrangement, and Object Assembly.

Memory: The subtest that assesses memory is Digit Span.

Young Children's Academic Intrinsic Motivation Inventory (Y-CAIMI) (1986)

Published By: Psychological Assessment Resources, Inc.
P.O. Box 98
Odessa, FL 33556

Purpose: The Y-CAIMI measures motivational orientation towards school learning in general, and across specific subject areas for students in grades 1-3. The 44 items comprise 122 items in 5 scales: Reading, Math, Social Studies, Science, and General. This self-report inventory can be administered individually or in group settings in about 20-30 minutes.

Format: Group or individually administered self-report inventory.

Scoring: Scoring information is provided in the manual and can be completed by the teacher or test administrator. The scores reflect academic intrinsic motivation defined as enjoyment of school learning characterized by an orientation toward mastery; curiosity; persistence; and the learning of challenging, difficult, and novel tasks. The scores on the CAIMI are positively related to scores on the Harter Motivational Scales.

Norming Information: Local norms can be established, but no national norms are provided.

Reliability: In the most recent studies, internal consistency (coefficient alpha) was computed for each subscale and ranged from .83 to .92. Test-retest reliability over a 2 month interval on a random sample of subtests ranged from .66 to .76. In both cases coefficients were consistent across grade, sex, and race.

Validity: Validity is discussed in relation to the Harter Scales of intrinsic/extrinsic motivation.

Relationship to TABs Summary: This test measures motivation for school learning in children from grades one through three. Five total scores are computed for: Total Reading, Total Math, Total General, Total Difficulty, and Overall Total. It is a research instrument, therefore norms are provided.

> **Motivation:** is addressed through questions regarding students enjoyment of school, learning and curiosity.

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